

# Psychological Bulletin

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### CLINICAL PSYCHOLOGY IN THE MILITARY SERVICES

Edited by

ROBERT R. SEARS\*

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\* Dr. Sears, Director of the Iowa Child Welfare Research Station, was made a consultant to the Office of Psychological Personnel in May, 1944, in order to carry out a special study of clinical psychology in the military services. As part of this project he has planned and edited the symposium here presented—Editor.

## CLINICAL PSYCHOLOGY IN THE MILITARY SERVICES

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The work of clinical psychologists has not been organized under any single administrative division in the military services. Problems requiring such specialized skills have arisen in many places, and individual clinicians have been assigned where they were needed. As a result, members of the profession are scattered throughout the services, and few of them, to say nothing of their civilian colleagues, have had very adequate conception of the role that clinical psychological work has played in the military organization so far.

In spite of the administrative decentralization, individual clinicians have done some extremely effective work. Ample testimony to this comes from the establishment of clinical psychologists as integral parts in the important new programs described by Seidenfeld and by Gillman and Ramsey in the papers that follow.

In order to bring together this work, that its scope might be more apparent to both civilian and military clinicians, a survey of the various assignments was made in July 1944. Information was obtained from three sources: published reports in the various technical journals, material on file in the Office of Psychological Personnel, and consultations with various administrative agencies in Washington. Undoubtedly many interesting programs were missed, but the over-all picture of the services given below probably covers the numerically most significant types of assignment as of July 30, 1944. Post-war historians will doubtless uncover many clinics, prisons, semi-experimental programs, hospital and rehabilitation activities that are not represented. Indeed, a full description of all the clinical work in the services would require a separate report from almost every active clinician.

Much of the work is being done under somewhat ambiguous titles, however, and one might easily get the impression that clinical psychology is not being widely practiced. The present series of reports shows how mistaken this notion is. It is hoped, too, that it will provide practical data from which post-war planning for the profession can draw suggestions as to services that can effectively be rendered by clinical psychology.

The job descriptions that are presented in the papers that follow are simply samples of the work of clinical people. Since the reports themselves reveal the relative isolation in which most of their authors have worked, the present paper will give below a brief survey of the three main service branches (Navy, Army Ground and Service Forces, Army

Air Forces) in an attempt to provide a more comprehensive setting for the individual papers.

One difficulty encountered in this survey has been that of deciding just what is clinical psychology. For example, the work of classification and personnel specialists has varied from creating group tests to the interpretation of test scores through detailed interviews with the men who take them. Clinical psychology is commonly understood to be a specialty in which individual persons are examined for diagnostic or therapeutic purposes, and in which the primary aim is to be of assistance to the patient or client himself. Logically, perhaps, some classification procedures could be brought under these criteria, but actually this work is organized in immediate connection with the larger program of occupational placement and it is questionable whether the *purposes* of the procedures could be related as much to the welfare of the individual as to the efficiency of the military services. A similar exception could be made with the diagnostic work in Naval Training Stations, but in such instances the actual procedures are so similar to clinical diagnostic work in civil life, and the skills required are so definitely those of the trained clinical psychologist, that it would be false to ignore them as a part of the total picture. There is no solution to this difficulty—in military life any more than in civil life—and no hard and fast criteria have been used in the selection of the jobs to be described. In general, these papers cover job descriptions, research programs and technical problems that relate to diagnosis of disturbed or maladjusted persons, reclassification of men for whom the standardized group techniques have been insufficient, and reeducative or therapeutic procedures.

The kinds of problems that arise in the military services are not dissimilar in many respects to those of civilian practice, although the age and sex characteristics of the population place emphasis on some types of disturbance and there is an infrequent occurrence of other types. The conditions of military organization, however, lead to greater specialization in practice for many clinicians. Those at Special Training Units deal largely with intellectually low grade personnel, for example, while others who are attached to general hospitals may see a fairly typical run of cases comparable to those of a civilian hospital. The enormous populations involved require special modifications in clinical procedure, as Wallen emphasizes in his paper. The necessity for speed in both testing and interviewing has been driven home by one published report after another. Not only the size of case load, but the fact that each case is a man whose primary job is to perform his military duties, demands that time allocated to each case must be reduced to an utmost minimum. Likewise, the aim of psychological work is often different from that of civilian practice. In the services, the main task is one of making the group operate effectively as quickly as possible and with the largest num-

ber of people. The individual's civilian aims and motives give way to his efficient performance of military duties as the principal frame of reference within which his welfare is sought, and the disposition of cases is planned on a different basis from that used in civilian life.

In addition to diagnostic and reclassification duties, clinicians are allocated to educational and reeducational procedures. This is particularly true for Personnel Consultants attached to a great variety of missions in different service commands. In the hospitals and redistribution centers clinical psychologists work under direct supervision of psychiatrists, and are frequently requested to assist in counseling and other therapeutic procedures. The amount of work of this nature is largely a function of the particular psychologist's experience and skill, and of the psychiatrist's need for assistance. Psychologists who are interested in reeducative therapy, and who are able to secure enough time free from their primary psychological duties, ordinarily find their psychiatric colleagues more than ready to assign them cases and to provide the necessary supervision.

#### NAVY

The work of clinical psychologists in the Navy is organized largely under the Neuropsychiatric Section of the Bureau of Medicine and Surgery. Properly trained people, both men and women, have been commissioned as H-V(S) and have been assigned to two main types of installation: Training Stations and General Hospitals. In each instance, the psychologist works both as an independent examiner and as a consultant to the psychiatrist. A number of detailed descriptions of the work at NTS have already been published, and these are reviewed by Hunt in the present series. No extensive report has been made before on the hospital work; two samples are given here by Mitchell and by Richards.

As of January 1, 1944, Louttit (36) reported 107 psychologists with commissions in H-V(S). Of these, 43 were engaged in what appears, from the record, to have been clinical psychology; the remainder were largely in the aviation psychology research program. By June 1 more than 50 were known to be doing clinical work. Detailed information on the location of installations was not available for security reasons.

The administrative arrangements in the Navy place clinical psychologists under the direction of a psychiatrist, both in selection and in operation. In any given post, the need for psychological assistance and a request for assignment are functions of the commanding officer, who is a medical man.

#### ARMY GROUND AND SERVICE FORCES

The situation is a little different in the Army Ground and Service Forces. Again there are certain classifications to be considered, one a

job classification and the other a duty assignment. The Personnel Consultant is an officer in the Adjutant General's Department (AGD); he is attached to a headquarters command for whatever purposes the commanding officer may require. In many instances, the Personnel Consultant is a mature and effective clinical psychologist, and his duties are those which might normally be required of such a person in the particular command to which he has been attached. Reports of three of these jobs have been published previously in the *Bulletin*, one by Gilbert (12) on an assignment in an Army Training Center, one by Henderson (16) on the "Star" Unit, and three papers (2, 38, 43), have described the procedures used in a Special Training Center (for illiterates). Such officers have been used in Induction Centers also (1).

As larger numbers of casualties, particularly psychiatric, have been sent to hospital, the duties have changed somewhat. The process of re-conditioning has now become of great importance, and Layman gives a description of some of the more recent problems in the present issue.

Until recently, the second place in which clinical psychologists were assigned was the Sanitary Corps of the Army Medical Corps. This is the branch of the Medical Department to which many non-medical specialists are assigned. During the last war, this was the chief place of assignment for clinical psychologists, and early in the present conflict a few men were commissioned there to serve in the Neuropsychiatric Units of General Hospitals. A preliminary report of their experiences was made by Layman (25) early in 1943. The work assigned to the psychologists was heterogeneous but fully in keeping with their training and with their commissioned status.

Because of increasing demand for clinical psychologists in medical installations, and the desirability of having direct technical supervision of the personnel by a clinical psychologist, a new program has been worked out in consultation between the Neuropsychiatry Division of the Surgeon General's Office (Col. W. C. Menninger) and the Classification and Replacement Branch of the Adjutant General's Office. This calls for the establishment of an Office of Chief Clinical Psychologist in the latter Branch; Lt. Col. M. A. Seidenfeld has been placed in charge of this Office, and he describes the new program in the present issue.

In addition to these two types of assignment, clinicians have been put into various kinds of work that bulk less large in numerical requirements but offer opportunity for extremely useful work. For example, time has finally become available for work on the preparation of individual tests, an area which in the early days of the war was of secondary importance to the development of group tests. A report on the new Army Individual Test of General Mental Ability is included in this issue.

Another program, semi-experimental in nature, in which a number of very able ASTP graduates were used, was that of the Developmental

Battalions. In this set-up groups of men were brought into camps for social psychological reconditioning or retraining. They were men whose morale had broken badly and who were in serious and immediate need of attention if they were to avoid becoming permanent casualties. This program was established on a trial basis, and a report of its procedure and results are given in the Staff report included in this present symposium.

Clinical psychologists are also attached to the Rehabilitation Centers of individual Service Commands. Here the clinical psychologist applies his skills in dealing with soldiers who have made such a poor adjustment to the military situation that they have been convicted by a general courts-martial and have been sent to these Centers in the hope that they may be made into useful members of the Armed Forces.

#### ARMY AIR FORCES

The principal clinical activities of psychologists in the Army Air Forces are in connection with Mental Hygiene Units, Personnel Distribution Centers, and the Convalescent and Rehabilitation Hospitals. The two latter programs are relatively new. Personnel Distribution Centers (formerly called Redistribution Centers) are designed for redistributing men who return to this country after the requisite number of combat missions. Lt. Col. Laurance Shaffer is in charge of the Psychological Section of this Command. There are a number of hospitals established for convalescence and rehabilitation of air force personnel. Psychologists have been assigned to each of these, on the request of commanding officers, for services as described in the accompanying paper by Gillman and Ramsey. Mental Hygiene Units are attached to various training installations, as is the case in other service branches. Their organization and duties have been described by Freedman (9, 10), and the clinical psychological work in an AAF MHU is described in the current issue by Deutscher.

This brief description of the organization of clinical psychology in the services is far from complete, but it gives an over-all view of the areas in which clinical psychology is making its numerically largest contributions. As the war progresses, administration of the work is becoming somewhat more centralized in a few branches.

Changing war conditions will unquestionably alter the kinds of tasks to which clinicians are assigned. Rehabilitation and demobilization (separation) counseling will no doubt assume more important roles. As these changing emphases occur, and as the necessary administrative machinery is continuously modified, the problem of appropriate assignment for individual clinicians in the services will not lessen materially. As an intermediary agency, the Office of Psychological Personnel has rendered service in assisting this naturally difficult process, to the benefit

of both the men and the services. Likewise, a number of psychologists in key positions themselves (e.g., Louttit, Jenkins, W. V. Bingham, Flanagan, Fitts, Limburg, Seidenfeld, and Shaffer) have been generous in providing information and recommendations to other branches and to the OPP. Without their efforts it is doubtful that the utilization of clinical psychologists would be as extensive as it is.

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## CLINICAL PSYCHOLOGY IN ARMY HOSPITALS

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*Lt. Colonel, A. G. D.*

A forward step in the growth of modern science is discernible in the growing stature of clinical psychology within the Army. Evidence of this development during the war years may be found in the frequency with which articles relative to applications of clinical psychology appear. A sampling from published reports, such as those of Bell and Altus (1), Heath (3), Layman (4), Seidenfeld (5) and the numerous reports made by the Staff, Personnel Research Section, should serve to convince the reader that clinical psychologists are making significant contributions to the War effort.

In the field, clinical psychologists working as Personnel Consultants have carried on individual consultation services in Induction Stations, Reception Centers, Replacement Training Centers, within Army Air Force installations, and Army Ground Force units. The contribution of clinical psychologists to Mental Hygiene Units of the Army has been stressed by Freedman (2), who states, "The military psychologist furnishes the psychiatrist and the military psychiatric social worker with data gained from measurements, utilizing intelligence, aptitude, achievement, and educational tests which combined with pertinent clinical observations, indicate the capacities and abilities a soldier may have."

From the start, the Division of Neuropsychiatry in The Surgeon General's Office bent every effort toward making full use of the psychologist in the medical program. Medical personnel have given clinical psychologists every opportunity to work as professional colleagues on the highest professional levels, providing optimal opportunities for them to deal with problems for which they are peculiarly qualified. The vision and understanding of such psychiatrists as Halloran, Menninger, and Farrell, working in the Office of The Surgeon General, as well as of many psychiatrists functioning in the field, have done much to clear the way for the present expanded program.

Only a relatively small portion of the published reports have dealt with psychological programs for military hospitals. In the past more attention has been given to the problems of personnel selection, training and aptitude testing, due to their important role in the initial phases of building a large military machine. With the attainment of this goal, more and more study has been given the maintenance of its smooth operation. Only after the onset of this secondary phase, however, do hospitalization, rehabilitation and correctional activities begin to attain their full degree of importance.

Actually, a number of psychologists have been engaged in clinical

psychology in Army hospitals during the past two years. Many of the psychiatrists now serving in the Army had made use of clinical psychologists in civilian practice. The needs of the Armed Forces have served to draw them from the wards of great hospitals, from institutions caring for the mentally and physically ill, and the many clinics in which they have exercised their professional skills. It is not surprising, therefore, that extensive use of psychological services should be continued in the military hospitals. The contributions made by the few professional men who initially participated in the program have served to emphasize further the unique values which psychologists have to contribute to diagnosis, to proper in-hospital vocational training and guidance, and to correct duty assignment as influenced by medical factors. Military psychiatrists who are responsible for the Army's program are convinced that the psychologist is an essential member of the medical team required to return the psychiatric casualty to duty or to a useful civilian life. As a result, the clinical psychologist is on the verge of extending his activities into all the larger military hospitals in this country and overseas. This program is in its earliest stages and, as a result, cannot be presented in great detail at this time. However, a somewhat generalized picture of its scope is included here, so that professional psychologists may be able to maintain their perspective as to the role applied psychology is continuing to play in the military services.

#### SCOPE OF THE PROGRAM

It is contemplated that clinical psychological services will be offered in the neuropsychiatric sections of all named and numbered general hospitals and in station hospitals of one thousand or more beds. These clinical psychologists will include men already commissioned in The Adjutant General's Department, and some enlisted personnel assigned to the Medical Department (who may be commissioned at a later date into The Adjutant General's Department). It is not contemplated at the present time that the program will require the commissioning of psychologists direct from civil life.

The duties of these clinical psychologists will include the following activities, as directed by the chief of the neuropsychiatric division of the individual hospital:

- a. Aid in the development and administration of a program of counseling for convalescent patients who are to return to military duties. In some instances this may be extended to include separation counseling for men leaving the service, when a specialist in Separation Classification is not on duty at the hospital.
- b. Assist in the preparation of clinical records insofar as they pertain to the use and interpretation of special psychological tests required by the chief of the neuropsychiatric section.

- c. Aid in the studies of special psychological problems relating to classification and retraining of neuropsychiatric casualties.
- d. Assist medical personnel in determining the appropriate military occupational specialties of men designated as ready to return to duty, with particular emphasis on the selection of assignments compatible with the individual's physical and mental status.
- e. To perform such other professional and administrative duties in the hospital, as will best assist the neuropsychiatrist in the accomplishment of the mission of proper management and disposition of patients.

#### QUALIFICATIONS OF CLINICAL PSYCHOLOGISTS

As has been indicated above, clinical psychologists will be selected, for service in hospitals, from those already in the Army. It is unlikely that a necessity will occur for commissioning personnel directly from civilian life.

In general, these men will be selected from among officers and men capable of interpreting clinical findings in the light of total personality structure and who make use of this knowledge in diagnosis. The clinical judgment demonstrated in the approach to the interview and in the development of the complete psychological history is weighted heavily in determining men qualified for this type of duty. These principal requirements are augmented by the stipulation that evidence be presented relative to the clinician's background in clinical psychometry as applied to individuals and groups, with marked emphasis placed upon interpretation and evaluation of measures dealing with personality, special aptitudes and intellectual capacity.

Academically, a master's degree, with specialization in clinical, educational or industrial psychology, is required as a minimum standard. Exceptions will be made only when the individual is recognized professionally as an outstanding clinical psychologist.

A background of military experience is held to be desirable but may be weighted less heavily when the professional background justifies such action.

#### ADMINISTRATION OF THE HOSPITAL PROGRAM

The utilization of clinical psychologists, who are under the jurisdiction of The Adjutant General's Department, in a program which is basically under the control of the Medical Corps, is an interesting example of interservice cooperation. To secure the smooth running of this plan, every effort has been made to select key administrative personnel who are at home in both branches of the Army.

A Chief Clinical Psychologist with the necessary number of assistants has been appointed. The office of the Chief Clinical Psychologist operates at the level of a technical advisor to the Chief, Classification and Replacement Branch, Adjutant General's Office. In this capacity,

the Chief Clinical Psychologist is in a position to advise the Chief of this branch on all matters relative to the use of psychologists in this program. Functioning in this capacity, he likewise has a direct advisory relationship to the Director, Neuropsychiatry Division of The Surgeon General's Office. Thus, all matters dealing with the administration of the program are cleared through a single responsible officer.

Conferences are held frequently between the Chief Clinical Psychologist and the staffs of the respective Chiefs of The Adjutant General's Office and The Surgeon General's Office. All problems are thus adjusted so that the program evolved serves the needs of the hospitals and their patients.

In the administration of the individual hospital programs, the Commanding officer of each hospital exercises control through the neuropsychiatric consultant on his staff. Central control is not attempted but suggestions and recommendations for the most effective use of clinical psychologists are made from the Office of the Chief Clinical Psychologist.

It is important that an appreciation be had of the highly cooperative relationship that exists in this project, for it represents to the best of the writer's knowledge, the largest single organizational program that has ever been established in which the psychologist is a collaborator in a psychiatric program. This symbiotic program depends upon a clear-cut recognition on the part of both The Adjutant General's Office and The Surgeon General's Office, that there are services which the psychologist trained in hospital practice can render more effectively than the physician, the social worker or any other category of professional.

#### TRAINING OF PROFESSIONAL PERSONNEL

The training of psychological personnel who are to engage in the hospital program is a matter of the utmost importance, in view of the rather limited numbers of psychologists who have actually had successful experience in this phase of applied psychology. The need for men who are qualified to carry on this work in the hospital wards is considerably in excess of the officer and enlisted psychologists who can be made available for this type of assignment. Many who will be assigned are therefore in need of a type of orientation to this field of endeavor. In general, they will have had excellent academic training but will be lacking in the experience of working with the mentally ill.

The selection of men for training will be based on knowledge of test administration and interpretation, stability of personality, and indications of adaptability to the hospital program. A training program will be provided which will be of sufficient length to insure proper orientation to the job and the securing of acquaintance with the basic techniques and practices to be used.

Further training under close supervision will be continued while the men are on hospital assignment. Frequent inspections by neuropsychiatrists of the staff of the hospital and of the Service Command will insure that standards of professional efficiency are maintained. The assistance of the Director, Neuropsychiatry Division of The Surgeon General's Office, and the Chief Clinical Psychologist of The Adjutant General's Office, will be utilized in this program as required by the hospitals and the Service Commands concerned.

A more formal description of the training procedures will be presented at a later date when the program has been completely established.

#### SUMMARY

A program of clinical psychological service in all general hospitals and in the major station hospitals is now being established. This program is operated by the Classification and Replacement Branch of The Adjutant General's Office under the jurisdiction of the Neuropsychiatry Division of The Surgeon General's Office. Responsibility for supervision and direction of the program rests with the Chief Clinical Psychologist, Adjutant General's Office, who is at present engaged in preparing a training plan and a personnel procurement program designed to supply the needs of the Army for clinical psychologists in hospitals.

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## RECONDITIONING PROGRAM: ARMY GENERAL HOSPITALS\*

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The Reconditioning Program, Army General Hospitals, was originally initiated in 1943 when classification of patients according to seriousness of the illness or injury, and a program of physical activity which paralleled the treatment was developed. That is, evidence had accumulated which showed that patients undergoing long periods of treatment lost the physical fitness acquired during periods of training. For instance, a patient with a joint condition requiring treatment in a cast tended to deteriorate physically through failure to keep the rest of the body in good condition. This loss necessitated physical retraining in order to acquire the flexibility, endurance, agility and coordination basic to a fighting condition.

Subsequently, it became recognized that morale, "fighting" mood and other psychological factors were also lost because of removal from units undergoing active training, discouragement over time in hospital and separation from friends. Similarly, it was also recognized that certain patients, following treatment and recovery, would require reclassification and, possibly, retraining in order to perform military duty. That is, to reclassify and retrain those with residual defects who could no longer perform the duties for which they had been trained originally. This was particularly true for the battle-wounded casualty, including those who would return to a changed duty status as well as those who would be separated from the military service.

In order to coordinate these and other responsibilities subsumed under the Program, a directive was issued in March 1944. This brought the activities under unified direction and provided a definite table of organization and skills requisite to the mission.

Patients are now classified into four principal groups, according to the current medical and/or physical condition. These are:

- a. *Class IV.* Those recovering from prolonged illness, serious injury, or surgery, and comprising bed patients.
- b. *Class III.* Those recently ambulatory and those whose ward or clinic treatment will extend over relatively long periods of time.
- c. *Class II.* Those capable of more extensive and intensive physical activity but still requiring treatment and/or observation by the medical officer.

\* The writer wishes to acknowledge his appreciation to Colonel L. R. Poust, M. C., Commanding Officer, Hammond General Hospital, for permission to prepare this article and his constructive guidance to the writer in directing the Program at this hospital.

*d. Class I.* Those in the final "hardening" process who will return to duty in a relatively short time.

However, for purposes of the Reconditioning Program, patients may be grouped into two major categories: (1) hospitalized for relatively prolonged periods (90 days or more), and (2) short term hospital treatment (less than 90 days). Division into these two groups allows for more intelligent direction and planning of the objectives to be described. These are:

1. *Physical.* Depending on the medical and physical condition of the patient, the intent is to initiate a maintenance type of calisthenics which gradually increases to those of a more definitely hardening nature. To illustrate: a patient may have undergone surgery which requires prolonged bed care or a cast over a repaired extremity. Such patients tend to become "soft" while awaiting full recovery. However, carefully planned calisthenics can keep the rest of the body in good muscular tone. During this period, the specifically injured part may also undergo physio and hydrotherapy. As rapidly as the medical officer prescribes, the nature, extent and intensity of the calisthenics are increased so that upon discharge from the hospital, the patient is physically ready either for military duty or for civil life, as may be the case.

2. *Education.* This activity has two major phases: (a) those of an academic or occupational nature, and (b) those designed to keep the patient intelligently informed as to background causes for the war, its progress, and his responsibilities with reference to our military objectives.

This and the reclassification program are of particular interest to the professional psychologist, since it is in these that his skills and training are of greatest value. In general, the educational objectives are emphasized most strongly for the patient who will require prolonged care and whose final physical status will require new civil or army occupational pursuits upon completion of the medical treatment. However, the short term group, particularly those whose educational careers were interrupted upon induction, are also encouraged to utilize the same facilities.

The Army, through the United States Armed Forces Institute, has developed an extensive correspondence and self study educational program. Approximately 750 courses are offered, ranging from about the seventh grade to college and post-graduate levels. The content is extensive and includes the usual academic as well as vocational and semi-vocational subjects.

The intent is to encourage the patient to take advantage of these educational activities. The educational officer, frequently a psychologist, acts in the usual guidance capacity and assists the patient to select subjects for study in terms of ability levels, previous education, aptitudes, skills, future educational and vocational interests. With the per-

manently handicapped, the guidance also takes that factor into consideration.

The second phase of the educational activities has been officially designated as "orientation-information." Its intent is not to indoctrinate or propagandize, but rather to develop opportunities whereby the soldier will be stimulated to think through, and more intelligently understand, our own national growth, institutions, ideals and customs. In addition, it intends to provide him with an intelligent understanding of our allies as well as the objectives and traditions of the enemy. In essence, the programs resemble a "town hall" meeting and are frequently led by the soldiers themselves. Directives require that the leader avoid dogmatic and personal opinions. Points raised by the participants are summarized objectively and without reference to social, economic, political, or other implications.

3. *Occupational therapy.* Historically, this profession developed as an aid in the treatment of the mentally and physically ill. Originally, it was intended to provide a diversional and interest factor in the treatment of these patients. It was eventually expanded for its therapeutic value to other types of patients and even to include occupational activities where such are indicated. That is, activities such as loom weaving, leather-craft and metal work are used to restore muscles and joints which have undergone injury with subsequent surgical treatment. Others, such as printing and carpentry, can be used both for the corrective value as well as for the vocational possibilities. These can be graded to coincide with the degree or type of movement or coordination which presently exists and gradually expanded as the basic physiological factor warrants.

4. *Classification.* Very recently the Army has introduced a physiological and physical scheme of classification, or a "physical profile." This profile affords a functional estimate of the various organs, systems and integral parts of the body as they relate to performance of military duty. Obviously, the Medical Officer is responsible for this phase of classification. However, a method is now provided whereby the Medical and Classification Officer can jointly determine the military (or civilian, when indicated) occupational assignment which the soldier is qualified to perform. That is, the Classification Officer determines the general ability, aptitudes and skills as they relate to the potential assignments the soldier is qualified to fill. These are evaluated in terms of the profile and its relationship to the potential assignments. Final assignment is then made in terms of the physical demands of the job, the profile, intelligence, skills and aptitudes.

In summary, the Reconditioning Program embraces calisthenics, education-orientation information, occupational activities both as

therapeutic aids and as they relate to prevocational planning, and classification and reclassification as determined both by the over-all and specific physical conditions and the intelligence, aptitude and skills required. The medical staff maintains responsibility and control to insure that all activities relate themselves to the medical and physical status of the patient. Actual supervision and accomplishment of specific missions is the responsibility of specialists working in collaboration with the medical staff. Emphasis on each mission is determined by such factors as: current medical and physical status of the patient, required length of hospital care, and ultimate disposition with reference to military duty or return to civil life.

## AN ARMY EXPERIMENT IN RETRAINING PSYCHONEUROTIC CASUALTIES

STAFF, CLASSIFICATION SECTION, CLASSIFICATION AND  
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### I. INTRODUCTION

Faced with a diminution of supply, the necessity for the conservation of such manpower as was available for military service has led to a number of investigations of possible methods of utilizing personnel in categories which have formerly been considered unusable. One such study is the Army's recent experiment in the retraining of a group of soldiers recovering from psychoneurotic disorders.

Previous experience has shown that the so-called reactive syndromes or situational neuroses are not of a malignant or deep-seated character. They respond favorably in a large measure to environmental rearrangement or social treatment. While many of these individuals have thresholds which make their placement in areas other than the zone of interior questionable, others show what appear to be complete recoveries. Many of these men possess skills which are of value to the Army and many others are capable of absorbing training for new military duties. To determine the feasibility of retraining recovered psychoneurotics, the Army undertook an experimental program which resulted in the saving for military service of a majority of the soldiers who participated in the program and who might otherwise have been discharged from the Army.

### II. CLASSIFICATION AND ASSIGNMENT

The initial procedure in this experiment consisted of the classification screening of a group of soldiers most of whom were hospitalized personnel with neurotic illness from both overseas and continental organizations. The purpose of this type of screening was to determine emotional, physical, and occupational suitability for retraining and to allocate personnel thus being classified to the appropriate training centers where, under a modified training program, the rehabilitation of these men could continue.

The classification and assignment of a soldier, in this experiment, resulted from the combined judgments of psychiatrists and psychologists. Each soldier was first interviewed by a neuropsychiatrist and his findings and recommendations were made available to the personnel consultant (psychologist) and classification officer. The neuropsychiatrist, during the interview, had before him, in addition to the man, the Service Record and the Soldier's Qualification Card. These records con-

tained a summary of the pertinent civilian and military accomplishments of the soldier (education, work experience, test results, military training, etc.), as well as a concise report of his military history. In addition to these basic records, there was available to the psychiatrist a clinical report from the hospital.

The psychiatric interview was followed by one conducted by two enlisted men, specialists in personnel psychology. This team carefully reviewed the findings of the neuropsychiatrist; Army General Classification Test score, aptitude, trade, and other test scores; civilian and military educational and vocational experiences; hobbies and interests of the soldier; and information concerning type and particular requirements of jobs available for which training could be provided at selected training centers. The information obtained through this interview became the basis for the interview-team's recommendations for one or more possible occupations. Further, a list of facts considered important to the continued readjustment of the soldier was prepared for use at the training centers.

The assignment of the men was accomplished after a full review of the observations from the previous interviews. Two officers (psychologists) functioning as an assignment board, in conference with the soldier, made the final recommendation as to the occupational assignment for the soldier. As a general working rule in recommending an assignment, emphasis was placed on the soldier's desires, needs and qualifications, as modified by his emotional and physical condition. However, new assignments resulted from the careful analysis of all the available information concerning each man.

Since therapy was a major factor in making an occupational recommendation, it was necessary in many instances to compromise minimum standards for entering an occupation. It is not surprising, therefore, that a large per cent of the soldiers were recommended for assignment to jobs on a higher level than that of their civilian jobs; likewise, some men were recommended for assignment to jobs on a lower level than their civilian jobs. In general, soldiers were given job assignments commensurate with their potential and acquired skills, as well as on the basis of opportunity for occupational advancement.

The success of this experiment was and is contingent upon the results of the training program at the three training centers, Fort Belvoir, Aberdeen Proving Ground, and Camp Lee. It was necessary, therefore, to devise experimental assignment techniques to fit the distribution of ability as evidenced by test scores, of age, and of neuropsychiatric ailments, in order that no one training center would be at an initial disadvantage when compared with either or both of the other training units. Since Aberdeen offered jobs which were predominantly more

technical in nature than those at either Belvoir or Lee, the men assigned for ordnance training were of slightly higher calibre with respect to scores on the Army General Classification Test. In general, the distribution of age groupings and types of diagnoses was the same to each of the training centers.

The problem of numerical distribution was rendered more complex than was anticipated by the policy of granting some of the enlisted men almost complete freedom of choice, sometimes both in job and locality. Considerable importance was attached to the matter of individual assignment as a means of active therapy. In a program of this kind, assignment must necessarily be largely personal. Numerical distribution must be subordinated to individual placement. Any other approach to the problem would serve only to aggravate psychoneurotic difficulties and to weaken the therapeutic value of rehabilitation. A returned overseas soldier who reacts violently to noises obviously could not be assigned to Aberdeen in any capacity; a soldier with organic difficulties in addition to his psychoneurosis could not be assigned to Belvoir for engineer training of a heavy manual nature. The recommendations of the psychiatrists as to locality of assignment were followed closely, and any man who had an intense desire for a particular training center was assigned accordingly.

### III. TRAINING

The Developmental Training Units at each camp were organized independently of each other and procedures were varied in accordance with existing physical and administrative dictates. The primary objectives of these units were:

1. To originate and test policies upon which future similar projects could be established;
2. To originate and test procedures by which tested policies could be adequately implemented in Army Regulations; and
3. To originate and test criteria to be used in evaluating the effectiveness of such a training program.

Secondary objectives of this experiment were to effect the return of convalesced soldiers to a full duty status or to separate those soldiers who could no longer perform military duties. Since it is not possible here to consider the detailed programs of each of the Developmental Training Units, only a brief description of operating procedures of the unit at Aberdeen Proving Ground is given.

Experience early indicated that a number of administrative problems required attention before the retraining of these soldiers for specific jobs could be undertaken. The pay, furlough, and supply problems were quite real to these soldiers. Arrangements were made to have partial payments of back pay given to all men; necessary clothing and

supplies were issued; and a lenient policy was formulated by which a short emergency or convalescent furlough was granted to all who were in need of them. The morale of these soldiers had been so conditioned by previous failure to appreciate the necessity of accomplishing these details that, upon arrival at the training center, the men were in no mood to discuss or embark upon job training. Modified garrison living, as initially followed, gradually emerged into full garrison type of living after approximately five weeks.

Specific training assignments to courses available under existing training doctrine at the center required that a careful analysis be made of the various recommendations which had previously been made for each soldier. A further problem was presented by the fact that many of the courses which were available at this center were being taught at a level which presumed special qualifications not ordinarily required for such occupational specialities in the Army as a whole. This problem was solved by inaugurating "on the job," or underway, training assignments for a large proportion of the soldiers assigned to Aberdeen. By means of this procedure, it was possible to provide for the continued convalescence of the trainees through rest, recreation, psychotherapeutic interviews, and intensive psychological and vocational guidance sessions, and at the same time to make available a type of training more in line with the previous training experience of these soldiers. At the inception of the program, one half of each day was devoted to technical training and the other half day to physical rehabilitation and group recreation. It soon became apparent, however, that the men preferred to spend longer periods in the pursuit of their training assignments. This resulted in a modification of the program to provide a full day of training each day except for two afternoons a week which were devoted to physical rehabilitation and recreation. "On the job" training was provided in 34 specific duties, while training in technical schools covered 17 specific military jobs. Every trainee who was in need of special psychological assistance was given at least three complete interviews by a psychologist while many men were given as many as eight such interviews conducted on a full clinical basis.

Upon the completion of the technical training course, and after medical clearance, each man was declared available for placement. Men were reported available to the local center for placement in the military duty requiring the training completed or were reported available to the Adjutant General's Department for special local placement within the continental limits of the United States. In order to insure that judicious assignments would be made, the recommended assignment was entered upon the Qualification Card, and an abstract of the classification board proceedings, together with a copy of the psychiatric report, accompanied each Qualification Card for the man concerned.

#### IV. SUMMARY

The experimental training program, inaugurated at three replacement training centers, which undertook the retraining of a group of soldiers with psychoneuroses possessing a variety of symptoms, made available for assignment to specific military duties a majority of the men who entered the program. While there is evidence to support the belief that such a program will make available to the Army a source of manpower formerly considered unusable, a definite evaluation of the program must, however, be based upon the performance of these soldiers on the jobs to which they have been assigned. To make possible this evaluation of the program, organizations to which these men have been assigned are being required to report the manner of performance of each recovered psychoneurotic assigned to duty through this program. A final determination of the effectiveness of the experimental procedure must await the judgments of the organizations from whom these reports will come.

The experience gained during this experiment has served, however, to bring to clearer focus several factors which are of primary importance in effecting the recovery of the psychoneurotic soldiers. Among these factors are:

1. Insuring that the men are paid promptly, they that receive new clothing when it is required, and that adequate furlough privileges are made available, thus making it possible for the soldier to maintain his self-respect and to be assured of the Army's continued interest in him; and
2. Keeping the soldier busy doing a necessary job which is commensurate with his skills and abilities, thus assuring him that he is making a contribution to the Army's mission.

## THE PERSONNEL CONSULTANT IN AN ARMY REHABILITATION CENTER

STANLEY LIPKIN

*Second Lieut. A.G.D.*

The work of the Personnel Consultant in Replacement Training Centers and Special Training Units has been reported in previous issues of this section of the *Bulletin*, but no description of the work in the Service Command Rehabilitation Center has been made. After a brief sketch of the mission, procedures and activities of a Service Command Rehabilitation Center, this paper will describe and discuss the nature of the duties of a Personnel Consultant and Classification Officer. The description will naturally be in terms of the personal experience of the writer, and is not necessarily representative of similar assignments in other Centers.

Rehabilitation Centers were established to prepare for return to duty, soldiers who manifested inadequate adjustment to army life by being convicted of a general courts-martial offense, although not all soldiers guilty of these offenses are sent to Rehabilitation Centers. The Rehabilitation Center receives and retains only those men who have not committed certain offenses (such as traitors, drug addicts, psychotics, perverts, murderers, arsonists, etc.) and who have been recommended for confinement therein and not at a Disciplinary Barracks. A soldier convicted and sent to a Disciplinary Barracks is a general prisoner, but at the Center he is considered a rehabilitee.

Preparation for returning to duty is accomplished by a three-fold program.

1. *Military training.* This includes the basic military subjects as well as the current army orientation program. Upon completion of this training, the rehabilitee is often militarily prepared for immediate overseas assignment, providing, of course, he is physically qualified for such duty.

2. *Educational activities.* For men who are illiterate or below fourth grade educational level there are classes where the tool subjects are taught. Those who have adequate proficiency in the tool subjects, study vocational subjects related to the military duties they may be required to perform upon restoration to duty. At present, the classes are conducted after training hours, and all rehabilitees are required to attend regularly the particular class they are assigned to by the officer in charge of evening school.

3. *Personnel adjustment.* A course in personnel adjustment is given to assist rehabilitees to orient themselves properly to military life.

Rehabilitees spend six or more months participating in this training. Their progress is reported on periodically by officers heading sections concerned with their training and behavior.\* These reports are

\* The Personnel Consultant is excused from turning in reports so as not to prejudice his therapeutic relationship with the rehabilitees, and thus ineffectualize his program.

included in the case history worked up by the Department of Psychiatry and Sociology. At the appropriate time, this and other pertinent material is submitted to the Commandant and the restoration board.\* They, after interview with the rehabilitees under consideration, independently recommend them as fully, partially, or not at all "ready for restoration."

Men considered "ready" are sent to the Personnel Consultant who as classification officer fills out a data assignment sheet.† Approximately three weeks and three days before a recommended date for restoration, the data assignment sheet, the recommendations of the board and Commandant, plus the records used by them as basis for decision, are sent to the Commanding General of the Service Command who makes final disposition. Disposition may mean restoration, transfer to a Disciplinary Barracks, or continuance of stay at the Center in expectation of further change and development which will permit restoration to duty status.

#### ACTIVITIES OF THE PERSONNEL CONSULTANT

*Personnel Adjustment.* Personnel adjustment, one of the three phases of restoration preparation, is achieved through a program of group psychotherapy conducted by the Personnel Consultant with the aid of four trained enlisted men. Approaches and techniques employed are those common to all group psychotherapy, but are modified so as to be applicable to an army situation with subjects who in the main do not have gross personality disorders.

Because of administrative and therapeutic needs, the program is built around two types of groups—large and small. Rehabilitees attend both types of groups three times weekly on alternate days; thus they participate in a fifty minute class six days a week. There are four large groups, each with a membership of approximately 200 to 250 rehabilitees, and sixteen small groups, each with a membership of approximately 40 to 60 rehabilitees. The large groups are conducted by the Personnel Consultant, and the small groups by enlisted group therapists.

*Large Groups.* The environment of each large group is generally structured to permit freedom of speech and emotional expression so that rehabilitees in responding to the stimulation of the group situation will reveal their characteristic emotional and behavioral patterns. The group's freedom is limited at times for therapeutic and military pur-

\* The restoration board consists of three officers from the Center appointed by the Commandant.

† This sheet may be briefly described as a summation of the rehabilitee's civilian and military skills plus suggestions for recommended assignment based on analysis of such skills. It also contains the contemplated date for restoration.

poses. The limiting factors are: 1. The Personnel Consultant, being an army officer, controls and limits the environment by his insistence that rehabilitees adhere to military procedure in the matter of being called upon or recognized in the group. 2. As a therapist conducting group therapy, he re-structures the environment to attain certain objectives. The strict observance of 1 will of course vary with the nature of 2.

Present at each meeting besides the Personnel Consultant is an enlisted group therapist. Present policy is to rotate this assignment, so that all the enlisted therapists will be kept up-to-date on each of the groups' levels of development.

*The Therapeutic Process.* To accomplish the objectives of the personnel adjustment program, mental hygiene concepts are discussed in terms of problems of adjustment peculiar to the army environment. The lecture is used for the initial explanation of the concepts. Since spontaneous opportunities to show inter-personal relationships as they exist, as they arise, and as they change in a life situation, often result from rehabilitee behavior, the lecture with its planned topic is frequently subtly abandoned and replaced by group psychotherapy which uses as legitimate material for group analysis and discussion all behavior manifested by the group or its members.

To illustrate: Let us say the topic for development and discussion in the large group is the frustration-aggression hypothesis. The Personnel Consultant develops this concept in language the men understand. When satisfied that they do understand, he asks members of the group for examples based on personal experiences. After examples are given, the group and the Personnel Consultant analyze and relate them to growth, social and personal, understood and accepted by the group.

The various steps in this therapeutic process follow no set pattern since the sequence depends completely upon the objective of the particular meeting as well as the group's attained social, emotional, and informational levels. It is, however, always planned that at the end of the process, social and emotional learning based on experiences in the group will be correlated so that all parts of the learning experience will have their proper relationship to each other.

For contrast, let us examine a meeting where situational needs made for a sequence differing from the above cited example. Group behavior which was indicative of emotional immaturity and inadequate socialization came to the attention of the Personnel Consultant. At his next meeting with the group in question, the Personnel Consultant "started the ball rolling" with a discussion and analysis of this behavior by both himself and the group.

The totality of possible implications of this behavior, social and personal, were examined by the group in the light of an already developed

"group psychotherapy universe of discourse." Those aspects of the behavior which were not readily explainable by concepts constituting this "group psychotherapy universe of discourse," were made meaningful by introduction on the part of the Personnel Consultant of hitherto undiscussed concepts. This brought to full awareness the underlying motivational forces of the behavior.

Before ending his consideration of this behavior, the Personnel Consultant contrasted the dynamics of this group's behavior with that of a group of soldiers in "good standing"; demonstrated thereby where the group's values were at variance with average values, and what changes of attitude and measures of growth, personal and social, would be necessary before their behavior would approximate the "norm."

*The Small Groups.* The environment of the small groups is structured for spontaneity and personalization to permit relation of learning resulting from large group interaction to specific problems of individuals. Personality tests are employed to organize four small groups of each large group so that men with somewhat similar levels of socialization and personality organization will be grouped together. There is, however, no rigidity about group membership and it is changed when it is therapeutically warranted.

Enlisted group therapists guiding and controlling the small groups hold frequent conferences with the Personnel Consultant to discuss specific problems confronting them in their groups. When they require more than verbal assistance, the Personnel Consultant, acting as a therapist, enters their groups and demonstrates the proper techniques and avenues of approach. As a Company Officer, he also enters the small groups to inspect their functioning. During the inspection he maintains a relationship with the rehabilitees similar to that of a Company Officer and not that of a therapist.

*Confinement and Group Psychotherapy.* Generally, confinement of some duration affects the uniqueness and spontaneity of the human personality and intensifies already present emotional conflicts and tensions. Group Psychotherapy has been prophylactic in preventing this condition from developing at the Center. Constructively, it has tended to develop socialized values and a better understanding of self and others on the part of the rehabilitee.

Specifically responsible in the Group Psychotherapy program is the practice of affording each rehabilitee an opportunity for self expression in a group composed of individuals with similar problems and the analysis of such expression by the group. The basis of this analysis is a universe of discourse consisting mainly of mental hygiene concepts but containing those concepts of the social sciences and of ethics which relate understanding of self and others to responsibility of self to others.

and society. This universe of discourse is acquired by rehabilitees through participation in the large group meetings.

As a consequence of confinement, a general prisoner may also tend to adopt an attitude toward authority which is unlike that of a soldier. Group psychotherapy seems to have arrested this, and instead, prepares the general prisoner for resumption of thinking and behaving towards authority like an enlisted man. The responsible factor is the division of large groups into small groups, for it enables the rehabilitee to participate in three dissimilar types of authoritative relationships; in the large group an "acting enlisted man to a psychologically oriented commissioned officer," who makes clear the need for authority and discipline and who discusses the factors underlying personal resentment and disobedience to authority; and in the small group of an "acting enlisted man to a non-commissioned officer." The third authoritative relationship, that of an "acting enlisted man" to a Company Officer, is a consequence of the Personnel Consultant's frequent inspections of the small groups. In this relationship the Personnel Consultant insists that rehabilitees behave in a manner typical of good soldiers.

*Progress Reports.* The flux of ideas, feelings and behavior manifested in the groups are recorded through daily progress reports, which are written up by all group therapists after each meeting. They contain a dynamic account of the group as regards its attitudinal, ideological and behavioral structure.

Changes in attitude and behavior on the part of individuals are also recorded. When these changes seem important, an abstract of the daily progress report is made and included in the rehabilitee's individual folder. The folder consists of an extract of certain items of the Service Record, Soldier's Qualification Card, and summaries of individual interviews. It also contains the rehabilitee's performance on personality tests which will be discussed in the next section.

The value of these reports is self evident. They enable the Personnel Consultant to measure the progress of groups and individuals as well as indicate to him when there is a need for change in group structuralization or individual rehabilitee change in particular small group membership.

*Personality Testing.* To assess objectively the results accruing from the personnel adjustment program as well as assist the program's functioning, the Personnel Consultant employs two well validated tests—The Minnesota Multiphasic Personality Inventory, and the Group Rorschach, as developed by M. R. Harrower-Erickson.

Each rehabilitee, on arrival, after a brief adjustment period is given both of these tests. Results of this first testing are utilized in two ways:

1. To structure the small group membership in terms of personality organization so it will be more effective as a therapeutic instrument.

2. At conferences, to acquaint the enlisted group therapists with the probable nature of the personality organization and difficulties of rehabilitees who will become members of their groups.

After sufficient exposure to the rehabilitation program, rehabilitees are retested to note whether the profiles on the Minnesota Multiphasic Personality Inventory, and the number of poor signs on Rorschach have changed. Changes are discussed at conferences between the Personnel Consultant and therapists. As a consequence, therapists are equipped factually to continue with the therapeutic process in a manner calculated to suit the particular level of development of the group and its members.

In the case of those whom the Commandant and the restoration board contemplate restoring, a third testing is administered as a means of checking the validity of the tests against the reports of officers close to the rehabilitees. It is believed that in this way objective standards in judging "restoration readiness" will be maintained, and possibly new objective factors uncovered as data accumulates.

The above is the procedure followed with those men considered literate for personality testing purposes. But from study of approximately 500 tests, it has been determined that rehabilitees below a certain critical AGCT (Army General Classification Test) score, and who have not attained sixth grade educational level, need a brief pre-test to ascertain whether or not they will need assistance in taking the tests. The pre-test used consists of the more difficult reading material from both personality tests. Should assistance be necessary, the special verbal testing techniques developed for such men is employed. This technique may be described as a form of paraphrasing in terms peculiar to a man's background and education.

In addition to the group personality tests described, the Wechsler Mental Ability Scale, Form "B," an individual intelligence test, is included as part of the battery of personality tests, for it samples personality traits and work habits, as well as gives a picture of mental functionings and intelligence level. It is used when requests for mental level or individual diagnoses are received from the Commandant or the Psychiatrist.

*Classification Activities.* The duty of Classification and Assignment Officer at the Center is discharged by the Personnel Consultant. In this capacity his main function is to suggest proper military work assignments for rehabilitees who have been recommended for restoration by the Administration.

Before suggesting an assignment the Classification Officer interviews each recommended rehabilitee to obtain a measure of his interests, abilities and work experience. He depends, however, mainly on two military forms to furnish the bulk of this information. These forms

plus the interview and the personality tests previously discussed are the basis for his judgment.

The forms are the Soldier's Qualification Card, War Department, Adjutant General's Office, Form 20, and the Service Record, War Department, Adjutant General's Office, Form 24. They record chronologically all aspects of the rehabilitee's military history as well as contain those facts of civilian training pertinent for classification purposes. The Form 20 is of particular value for it contains a detailed picture of civilian and military work experience, schooling, learning ability, and special aptitudes.

Using this material, the Classification Officer makes up a Data Assignment Sheet for the Service Command, which may be described as a summarization of information already present on the Form 20 and in the Service Record. It does, however, contain three items which are not in these records: recommended assignment, special qualifications, and readiness for overseas duty. Before recording them, the Classification Officer analyzes each recommended rehabilitee's military and civilian history and decides in what capacities the rehabilitee would best serve the army—all factors considered. He also decides whether the rehabilitee is militarily prepared for overseas shipment now or will be ready in the near future. These decisions are not final, for the Service Command makes final disposition as to the particular organization and duty to which the rehabilitee will be assigned.

It can be seen that classification procedures followed at the Center are similar to those employed at all military installations. But since there is greatly increased information at the disposal of the Classification Officer, it is possible to suggest assignments which will consider more completely the "whole person," while keeping foremost the needs of the army.

Maintenance and completion of rehabilitee's Soldier's Qualification Cards, Form 20, is also the responsibility of the Personnel Consultant. In this connection, it is frequently necessary to initiate a new Soldier's Qualification Card, or complete an old one. Such completion often entails the administration of the AGCT and the MA (Mechanical Aptitude) test. These tests are not given daily like the personality tests. Procedure is to accumulate a sufficient number of tests so as to have the benefits of group testing.

#### MISCELLANEOUS DUTIES

*Consultant to the Commandant and Company Officers.* Because of his work in group psychotherapy and personality testing, the Personnel Consultant is in a position to sense the shifts in morale, attitudes, and feelings present in each rehabilitee group as well as to note gross or

slight rehabilitee character and attitudinal changes. When these changes bear relationship to administration policies, objectives and problems, he brings them to the attention of the Commandant and those officers responsible for rehabilitee training and behavior.

These discussions are held routinely with the Commandant, and when necessary, with other officers, but they are not intended to give the Personnel Consultant's evaluation of individual rehabilitees. Their value stems primarily from the picture given officers of the Center of the difficulties attending efforts of rehabilitees to adjust certain aspects of their personality and attitudinal structures to socially acceptable norms.

Lately, a new phase of activity has been undertaken by the Personnel Consultant. This is the formulation and direction of a program of in-service training for guards and custodial personnel to control, understand, and evaluate the men under them.

#### SUMMARY

The principal duties of the writer as Personnel Consultant and Classification and Assignment Officer consist of:

1. Conducting a program of group psychotherapy to:
  - a. Reduce emotional tensions present among the rehabilitees.
  - b. Develop social and personal values more akin to those of the average soldier.
  - c. Assist rehabilitees to a better understanding of self and others.
2. Carrying on a program of personality testing to:
  - a. Enlighten both the Personnel Consultant and his enlisted assistants as to the nature and types of personality difficulties and personality structures possessed by the rehabilitees.
  - b. Measure changes in attitudes and anxieties resulting from the program of group psychotherapy at the Center.
3. Acting as Personnel Consultant to the Commandant and other officers of the Center on matters pertaining to group and individual rehabilitee morale and development.
4. As Classification Officer, carrying on duties common to all Classification Officers but with the major function of recommending assignments when rehabilitees are considered ready for restoration by the administration.
5. Scheduling a lecture program for guard and custodial personnel to give them a better appreciation of the problems they face in their relationships with rehabilitees as well as means to solve these problems.

## THE NEW ARMY INDIVIDUAL TEST OF GENERAL MENTAL ABILITY

STAFF, PERSONNEL RESEARCH SECTION, CLASSIFICATION  
AND REPLACEMENT BRANCH

*The Adjutant General's Office*

The Army Individual Test has been prepared by the Personnel Research Section in response to numerous requests from the field for an individual test of general learning ability. In the absence of any test prepared by the Army for Army-wide use, these requests frequently have specified one or another of the widely known individual tests that provide measures of mental age and IQ for adults. However, none of these tests meets all of the requirements for an individual test for Army use, particularly since the concepts of the MA and IQ are not meaningful in the Army situations in terms of the evidence available.

For the most part, the need for an individual test has been reported by three general types of installation. Two of these, Special Training Units (where men who cannot read and write English are taught to do so) and Replacement Training Centers, have wanted a test that could be used to back up recommendations for or against discharge because of inaptitude. Army hospitals, convalescent centers, and the like, have requested an individual test to be employed together with other clinical techniques in psychiatric diagnosis.

The use of an individual test of general mental ability, in addition to the Army General Classification Test, is based on the consideration that the individual test, while measuring the same abilities as the group test, will in some cases yield a more valid measure of those abilities, or will yield useful information of a clinical nature gained from observing the individual's behavior in the testing situation. It is, of course, true that some men, particularly within the standard score range from 50 to 80 (minus  $2\frac{1}{2}$  sigma to minus 1 sigma), do not display their real ability on a group test and that, for these men, an individual test may be used to discover behavior and abilities that fail to appear in the group testing situation.

With these facts in mind, it was decided to build an individual test of general mental ability, especially for Army use. Certain specifications were set for the new test.

1. It must cover the same range of abilities as the Army General Classification Test and be validated against that test. (These are obvious requirements since the demand was for an individual test measuring the same abilities as the Army General Classification Test.)
2. It must contain both verbal and nonverbal or performance material.
3. It must be applicable to both white and Negro soldiers.

4. It must take the minimum testing time consistent with maintaining adequate reliability and validity.
5. Its content must be appropriate for and interesting to Army personnel.
6. It must not presuppose that trained psychometricians will always be available.
7. It should require a minimum of testing materials involving special procurement.
8. It must be standardized and calibrated so that each soldier tested is compared with the population to which he belongs, that is, the population of soldiers in the Army. The scale in which the measurements are expressed must be, therefore, a standard score scale or a percentile scale but not a mental age scale which would imply comparison with the average mental abilities of children of specified ages, an irrelevant and misleading comparison.

The construction of the new Army individual test began with the selection of seventeen tests for the initial try-out. These included six tests from a commercially published individual scale widely used in the Army and eleven other tests either constructed by this office or adapted from other sources and revised to fit the Army situation. The tests tried out were:

*Verbal Tests*

- General Information
- General Comprehension
- Digit Span
- Digit-Symbol Substitution
- Series Completion
- Vocabulary (25 general terms, 25 military terms)
- Story Memory
- Similarities-Differences
- Counting Backwards

*Nonverbal Tests*

- Block Designs (reproducing with blocks designs presented on cards)
- Spatial Orientation (finding directions on a map)
- Shoulder Patches (making a shoulder patch from cut-out cards)
- Cube Assembly (assembling cubes into piles as shown on a chart)
- Trail Making (connecting numbers and letters by lines drawn in a definite series)
- Cube Adaptation (returning a set of cubes to their original positions after the cubes had been displaced)
- Serial Memory (memory for a series of auditory clicks)
- Window Completion (completing a spatial design)

The main validation study was conducted with a sample of 465 trainees, including 250 white and 215 colored soldiers. The original plan called for 50 white and 50 colored soldiers from each of the five Army grades on the Army General Classification Test so that the full range of ability on that test might be represented. It was found impracticable in the course of the study, however, to obtain a full quota of Grade V white or of Grade I colored soldiers, and the numbers in

those categories were somewhat reduced. All the men were native-born literates in regular Army training. The groups were approximately equal in age. There was, of course, a marked relation between years of education and score on the Army General Classification Test. All of the experimental tests were administered to this population, and the data were then analyzed.

It was possible to estimate the reliability for thirteen of the experimental tests by means of Kuder-Richardson formula #20\* and variants of that formula. Table I gives the reliabilities for these tests for the white population tested; the reliabilities for the colored group are practically the same.

TABLE I  
RELIABILITIES OF EXPERIMENTAL TESTS  
N = 250

*Verbal Tests*

General Information	.88
General Comprehension	.82
Series Completion	.81
Vocabulary	.92
Story Memory	.92
Similarities-Differences	.91

*Nonverbal Tests*

Block Designs	.88
Spatial Orientation	.74
Shoulder Patches	.64
Cube Assembly	.77
Trail Making	.84
Cube Adaptation	.50
Serial Memory	.78

The data for the white and colored soldiers were analyzed separately throughout. It was found that white and colored subjects with the same Army General Classification Test score made approximately the same score on the seventeen tests. On the nonverbal tests, small and insignificant differences were rather consistently in favor of the whites while the colored groups showed some superiority on the verbal tests. The correlations of the tests with the criterion differ insignificantly for the white and colored populations.

The various test intercorrelations and the correlations of each test with education and the criterion for the white group are shown in Table II.

The selection of tests for the final battery would be a fairly simple problem if statistical considerations completely determined the choice. In addition to statistical considerations, however, weight was given to

\* Kuder, G. F. & Richardson, M. W. *The Theory of the Estimation of Test Reliability*. *Psychometrika*, 1937, 2, 151-161.

TABLE II  
INTERCORRELATIONS OF THE EXPERIMENTAL TESTS AND CORRELATIONS WITH EDUCATION AND WITH THE ARMY GENERAL CLASSIFICATION TEST FOR THE WHITE SOLDIERS

the requirements of economy, balance of verbal and performance tests, equal applicability to white and colored trainees, saving of time, simplicity of equipment, and suitability for general Army use—the requirements laid down when construction of the new test was begun.

Six tests were chosen for the final battery: three verbal and three performance. The three verbal tests first chosen were Similarities-Differences, Story Memory, and Vocabulary. However, it was found advantageous to substitute Digit Span for Vocabulary. Digit Span was an exceptional test in that its predictive value was much higher for the colored group than for the white. Its inclusion raised the correlation of the final battery with the Army General Classification Test from .69 to .74 for the colored group while not affecting the correlation for the white group (.84). Digit Span is the only numerical test in the battery and is much shorter and more objectively scored than Vocabulary.

The three performance tests selected were Trail Making, Cube Assembly, and Shoulder Patches. While Shoulder Patches did not show up as well statistically as other tests in this study (correlation with the Army General Classification Test, .52; reliability, .64), its appeal to the testee was such that it was decided to revise the test and the scoring for another try-out. The revised test was given to 200 white soldiers, 40 in each Army grade on the Army General Classification Test. The reliability of the revised test was found to be .86 and its correlation with the Army General Classification Test .65; therefore, Shoulder Patches was included in the final battery.

The six tests of the final battery, which is called the Army Individual Test, AIT-1, are given in the following order: Story Memory, Similarities-Differences, Digit Span, Shoulder Patches, Trail Making, and Cube Assembly. All subtests must be given; no subtest is ever given separately.

The Army Individual Test has been standardized and norms in the form of Army grades and standard scores have been prepared. The standard scores for this test are defined as having a mean of 100 and a standard deviation of 20, the same as the standard scores for the Army General Classification Test. The test was standardized on a group of 1,000 soldiers selected to be representative of the total Army population with respect to their scores on the Army General Classification Test. The reliability of the final battery, as estimated by Kuder-Richardson formula #2\* is .93 for the white population. The intercorrelation of the tests in the final form, and the correlations of the tests with the Army General Classification Test are given in Table III.

\* Kuder, G. F. & Richardson, M. W. *The Theory of the Estimation of Test Reliability*. *Psychometrika*, 1937, 2, 151-161.

TABLE III

## INTERCORRELATIONS OF SUBTESTS OF ARMY INDIVIDUAL TEST AND CORRELATION WITH ARMY GENERAL CLASSIFICATION TEST

	N=1,000						
	1	2	3	4	5	6	7
Story Memory	1	.61	.38	.45	.41	.37	.61
Similarities-Differences	2		.45	.54	.54	.42	.71
Digit Span	3			.38	.42	.32	.56
Shoulder Patches	4				.48	.60	.61
Trail Making	5					.43	.65
Cube Assembly	6						.54
Army General Classification Test							—
		7					

In the standardization of the tests, the weighting procedures that should be used in order that the verbal and nonverbal tests contribute the same amount to the variance of the total score on the test were determined. The optimum weights are as follows: Similarities-Differences, 2; Digit Span, 4; Trail Making, 2; all other tests, 1. The correlations of the total weighted score on the verbal tests, the total weighted score on the nonverbal test, and the total of both verbal and nonverbal tests with the Army General Classification Test are as follows:

Verbal tests	.78
Nonverbal tests	.74
Total test	.84

The test, in its final form, requires very few materials. For the verbal tests, all the materials needed are the score sheet and the manual. The three performance tests require, in addition to the score sheet and the manual, certain other materials: for Shoulder Patches, one sample and nine Shoulder Patch cards together with nineteen colored cards with which to build the designs; for Trail Making, a pad of test sheets; and for Cube Assembly, 24 one-inch cubes and three pictures of assembled cubes.

The tests are easy to administer. Story Memory is based on a short paragraph describing a military incident. The paragraph is read to the examinee who is asked to repeat it and answer questions. Similarities-Differences consists of pairs of words; the man being examined tells how they are alike and how they are different. One point is given for an acceptable similarity and one point for an acceptable difference, making a maximum score of 2 for each item. Digit Span consists of series of from three to ten digits which the examinee is to repeat in the order given and series of from three to nine digits which the examinee is to repeat backwards. In the Shoulder Patches test, the examinee is given

a colored design which he must duplicate using colored cut-out designs. In Trail Making, the subject draws lines from number to number or from letter to letter in sequence; the score depends on the time required for an errorless performance. In the last test, Cube Assembly, the examinee is given a picture and cubes with which he must duplicate the arrangement shown in the picture. The score depends upon time to complete the test.

About 40 minutes are required for administration of all six tests.

Thus, the new Army Individual Test meets the specifications laid down for its construction: it is valid and it is practical. Its validity in terms of the Army General Classification Test is high. It contains both verbal and nonverbal materials which contribute equally to the variance of the total score. It is applicable to both white and Negro soldiers. It requires a minimum of testing time and trained psychometricians are not needed to administer it. A minimum of testing materials requiring special procurement are needed. Finally, it is so standardized that it compares each man with other men in the Army by means of standard scores; MA's and IQ's are not used in any interpretation of the test scores.

## SOME TESTING NEEDS IN MILITARY CLINICAL PSYCHOLOGY\*

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Psychologists in military service are of necessity required to rely greatly upon equipment and procedures developed in civilian life. True, much that is new and important has been accomplished within the armed forces themselves, but modifications of peacetime practices are often mainstays of the psychological armamentarium. In fact, the psychologist in clinical work has little else. Since methods developed in other circumstances will have limitations when they are applied in wartime, it seems worthwhile to point out some needs which have become apparent in the experience of one person engaged in naval clinical psychology. The present paper discusses some of the needs in clinical testing and suggests a possible way of meeting them.

The general nature of psychological work in naval Neuropsychiatric Units has been described by several authors whose papers are summarized by Hunt, in the present symposium. As they show, one of the chief contributions of the clinical psychologist in the unit is the administration and interpretation of tests to recruits suspected of neuropsychiatric handicaps. Intelligence tests, of course, are of first importance, but the psychologist is often asked to furnish such other test data as may be available in order to evaluate more fully the recruit's fitness for service. The usefulness of the psychologist in such situations, then, is directly related to the amount of relevant test information he can rapidly assemble. Unfortunately, that kind of information is rather limited at present.

The first factor which limits the number of usable tests is the long testing time required by most published tests. Lewinski and Pennington (1, p. 522) point out:

Because of the national emergency, psychometry in the Navy must necessarily be expeditious. Involved and time-consuming tests, while frequently of value, are not practicable when large numbers of persons must be examined in relatively limited periods of time.

What constitutes an impracticable testing time depends upon local conditions, but experience at Parris Island suggests that any test requiring more than 15 minutes will be little used. This conclusion seems to apply in other activities, for both papers cited above refer to 10 minute intelligence tests in a way indicating that they are used frequently.

\* The opinions and assertions contained in this paper are the private ones of the author and are not to be construed as official or as reflecting the views of the Navy Department or the naval service at large.

We may remind the horrified civilian psychologist that the recruit has much to do besides taking tests, and reassure him that when possible longer tests are given. But if more tests are to be made available for military use, they must be short.

A second limitation of extant tests, particularly those in the field of personality, is the relatively high reading level required of subjects before the test can be administered. A wide range of reading ability is found among recruits, and often the very cases where testing could be most helpful are unable to understand many of the usual personality inventories. Anyone who has tried to formulate test items which would be clear and unambiguous for college students can appreciate the impossibility of administering those same items to practical-minded adults with limited schooling. No matter how effective the various inventories and schedules may be in other programs, they cannot be expected to work with men who stumble through seventh grade reading paragraphs. Even such a direct question as "Do you have fainting spells?" will be answered "yes" by persons who have grand-mal seizures, those who have suffered heat-exhaustion, those who have dizzy spells, and those who one time thought they were about ready to faint. In general, clinical tests, to be useful in Neuropsychiatric Units, should be couched in simple language and be capable of oral administration.

In connection with the matter of reading level, it should be stressed that directions for the subject must be easily grasped and the performance required of him in responding must be simple. In navy clinical work, tests are usually administered individually, and complex instructions take added time for every person tested. It requires more time than it is worth to teach a man to answer by using a 5 point scale. Simple yes-no answers, placing cards in boxes, or checking items in a list are capable of being widely applied.

A third disadvantage of some published tests is the length of time needed for scoring and interpretation. As a rule, those tests are most appropriate which can be scored and interpreted within 5 minutes after administration. Some rather remarkable achievements are possible in this respect. The Kent Oral Emergency Test can be scored and the credits summated while the recruit is answering, and the mental age can be found in a few seconds. The Bellevue Scale can be scored during administration by tallying the credits for each answer as it is given, and if typed copies of relevant tables are at hand the weighted scores and I.Q.'s are determined in less than a minute. The Rorschach, on the other hand, requires from 20 to 60 minutes to score and interpret. If the recruit has several interviews in succession, it is almost impossible to make Rorschach results available to the next interviewer. Scales having a number of scoring keys with a wide range of weights are also of limited usefulness. Of course the information given by these longer tests is

sometimes worth the added time, but often it seems more advisable to devote that time to a direct interview. If a printed form is used for recording individual tests, the inclusion of tables of norms on the record sheet will save time.

The reliability and validity of published tests need not be discussed here except to point out that more representative samples of the population should be used in establishing these qualities. Norms appropriate to the military situation can be collected as needed provided the tests are practical, but the clinician wants assurance that the validity of a test is not impaired if it is used with non-college samples.

Since few present tests have features which enable them to be used in examining recruits, new ones ought to be constructed. The question is whether or not it is feasible to construct short, rapidly scored, and easily understood tests which will possess any validity. We believe such tests can be produced because of one important difference between military clinical work and civilian testing. The difference lies in the fact that in the former case the test is not required to be discriminative except at one extreme of the trait continuum, while in the latter case the test should be discriminative throughout the entire range of the trait.

As a rule the recruit examination is devoted to the identification of deviate persons; more specifically, the psychologist wishes to identify deviates who will be of no value to the armed forces.\* He is not primarily interested in whether or not a recruit has made a better than average marital adjustment or a somewhat below average job adjustment, but he is interested in locating those whose adjustments have been poorer than, say, 90% of the men of military age. It is the excessively worried, withdrawn, or homesick persons who must be studied rather than those who are only mildly so. If this view is adopted, a test need differentiate only between the atypical and the somewhat atypical person to be satisfactory.

Such tests may be constructed by using items to which a very large proportion of the population studied will respond in a given way. With two choices, A and B, an item will be satisfactory if from 75% to 90% of the standardizing sample select A. The choice of B is, then, in itself an atypical performance. Items so chosen tend to intercorrelate positively, and total scores yield a markedly skewed distribution. The tail of this distribution contains scores of persons who have an undesirable degree of the trait in question. A cutting score may be determined, and validation carried out using bi-serial correlation. The number of items needed to produce sufficient scatter at one extreme is much smaller than the number needed to give spread to the whole trait range.

\* The aim of psychologists who are engaged in classification is entirely different, and their tests must be discriminative at all points of the trait continuum.

Promising results have been obtained in exploratory studies with this technique. In one case, a list of 20 items which could be administered orally in about 3 minutes was found to differentiate effectively between neurotics and randomly chosen controls. The cutting score was exceeded by only 2% of 100 controls but was exceeded by 50% of 50 neurotics. Similar results have been obtained from equally short check lists of interest.

Since this proposal makes very short tests possible, it should be a simple matter to give and score as many as 5 or 6 in a half-hour interview. Tests dealing with special traits, rather than over-all diagnoses, would be of greatest use. The manual by Wells and Ruesch (2) contains material which could be adapted for rapid checks of intellectual functions. Conceivably, excessive worriers could be identified by a check list of topics so selected that only 10% or 20% of the population worried about each one. Descriptions of infrequent acts of resistance may be used to find those who react adversely to authority. It should not be extraordinarily difficult to make short questionnaires dealing with marital adjustment, dependence on the family, lack of self-confidence, and similar subjects.

Although short tests would be most valuable in the rapid screening of recruits, non-military uses probably exist. In industry we may wish to eliminate applicants who are atypically submissive or intolerant, although we may have no interest in the milder degrees of these traits. Sometimes we wish to locate persons who are unusually exceptional and desirable with respect to some trait. Theoretically this problem is solved by the techniques we have described, but in such cases the need for saving time is usually not great enough to warrant the use of the short test if longer ones are available.

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## THE CLINICAL PSYCHOLOGIST IN AN AAF MENTAL HYGIENE UNIT

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The present paper describes the manner in which one Mental Hygiene Unit (MHU) is organized and the job performed by its psychological staff.

In discussing the disposition of neuropsychiatric cases in the Armed Forces, a circular letter from the Office of the Surgeon General stated that "each case must be evaluated individually and disposition made on basis of clinical judgment as to the individual's potential value to the service" (1).

Although this was published almost a year after the establishment of the Mental Hygiene Unit at Drew Field, it aptly summarizes the philosophy and policy of that unit. As stated in a memo issued by the Third Air Force, the MHU is set up:

- A. To provide assistance to military personnel who present various forms of maladjustment such as inaptitude, unusual behavior, malingering, recalcitrance, goldbricking and alcoholism.
- B. To recommend corrective measures to reduce or eliminate the individual's maladjustment and to eradicate environmental factors causing mental breakdown.
- C. To determine, in coordination with Unit Classification Officers, whether individuals are in assignments that do not utilize their capabilities to the fullest extent possible, or are being trained in a skill beyond that capacity.
- D. To recommend the discharge of individuals who because of mental or emotional factors are not functioning adequately and those who are a hazard to others. Within this category are persons found to be psychotic, severe psychoneurotics, epileptics, psychopaths, morons, chronic alcoholics, enuretics and drug addicts.
- E. To secure psychiatric, psychological and social data for presentation to courts-martial and discharge boards.
- F. To cooperate with the Red Cross and similar civil agencies to the end that discharged personnel will be given assistance in their return to civilian life.

The MHU consists of a psychiatrist who is the director of the unit, an assistant director who is the administrative officer and supervisor of the psychology department, ten psychiatric social workers, two of whom are WACS, and a psychology department of three psychologists. One of the psychiatric social workers is a clinical psychologist who is devoting half time to work with projective techniques. The psychiatrist and assistant director are officers. All other personnel are enlisted men.

Psychiatrist, psychiatric social workers, and psychologist work as

a clinical team. This has posed the chief problem of the use of a common language and the translation of the results of psychological tests into case work and psychiatric terminology. The case workers and psychiatrist have also adapted many of the psychological concepts as well as the more specific information about particular tests. In the process of working together the uniqueness of the contribution of each member of the clinical team is brought out, and the value of such a coordinated approach is emphasized.

In an unpublished study of soldiers referred to the MHU in the past year, it was found that the far greatest percentage presented intra-personal problems, the most common symptoms being anxiety, insomnia, fears, obsessions and nervousness. Somatic complaints, such as gastric and cardiac symptoms, headaches and pains in arms or legs or back, were present in a much lesser number. Referrals for interpersonal problems, including violations of military law and inability to get along with other men and officers, constituted a still smaller group. The primary sources of referral were medical officers and commanding officers. Classification officers, Red Cross workers, and chaplains also referred soldiers to the unit. Some very few were self referrals.

Psychiatric case workers\* see all men referred to the unit. A case history (2) is taken which contains a study of the areas of (a) family relationships, (b) past personal history, which includes early development, medical, scholastic, occupational and legal history, (c) social history, covering socio-sexual development, civilian and army recreational pattern, extent and influence of religious participation, (d) army record, training received, job classification, record of courts-martials, ratings of character and efficiency, (e) statement of the details of present illness, (f) description and evaluation of mental and emotional status, which includes the report of the psychologist, and (g) interpretation of the case by the case worker.

Red Cross histories are obtained on the majority of patients. These include a complete history of the individual in his familial and community setting prior to army induction and follow the same general case history outline as that used at the unit, so there is both a check and a supplement to the information gathered here. Other community sources from whom information is frequently requested are civilian doctors, hospitals and various correctional institutions.

In the course of the case workup by the psychiatric social workers,

\* Qualifications of the military psychiatric social worker: The job title, social worker, is assigned to persons having had two years of supervised experience in a private or public agency performing regular supervised case work. Graduation from a recognized school of social work with a degree or membership in the American Association of Psychiatric Social Workers will satisfy requirements (3, p. 55).

patients may be referred for psychological examination.\* The usual types of problems are (a) determination of the level of intellectual functioning, (b) determination of the presence and extent of deterioration (c) analysis of the structure of personality, its efficiency, and areas of conflict, (d) assistance in the selection of patients for psychotherapy and the appraisal of the effects of ongoing or completed therapy, and (e) evaluation of failure in army assignment.

All five types of problems are handled by the same devices, the administration and interpretation of psychological tests. Experience has contraindicated the use of a wide variety of statistically standardized group personality tests. It was found that the numerical scores added little to the clinical understanding of the patient. This fact, and the military need for a reasonably short psychological supplement to a clinical workup have limited the psychological test battery to a Wechsler Mental Ability Scale, Form B, the Rorschach and the Thematic Apperception Test. Non-language tests and Army General Classification Tests are administered by the Base Classification Unit and are incorporated in the psychologist's report. Aptitude tests are usually reported on the Soldier's Qualification Card. When it is desirable further to assess a soldier's aptitude for any given job placement or school, he may be referred to the Base Classification Officer for the necessary test administration.

The findings of the psychologist are incorporated in the case record prepared by the case worker. Case worker and psychiatrist confer on each case, arrive at a diagnosis and make plans for disposition. The attempt is made to formulate the psychological report in terms which will assist them and which will be meaningful in solving problems of differential diagnosis and in planning a treatment program. Usually mental age, intelligence quotient and Army Classification grade are reported for the intelligence test. In certain instances analysis of scatter may reveal or substantiate evidence of organic pathology or particular neurotic processes. Rorschach reports are concerned with the various elements of the diagnostic picture and, wherever indicated, the areas which may be positively affected by psychotherapy. The Thematic Apperception Test, has, so far, proved most useful in indicating content of emotional conflicts and the kinds of attitudes and relationships which the patient has to various persons, towards being in the army and, occasionally, towards his own problem.

\* The psychologist will be an enlisted man with the military occupational speciality of 289 and the job title of Personnel Consultant Assistant. He must be a college graduate and preferably have a Ph.D. from an accredited college or its equivalent in clinical psychology. It is desirable that he have experience in a psychological agency under the supervision of a psychiatrist so that he will be familiar with personality problems and the methods of handling them (3, p. 56).

The psychologist uses all of the material gathered by the case worker and makes his own observations of test behavior in addition to obtaining the results of the tests. His report may also indicate whether the soldier is properly placed vocationally for his intelligence, aptitude and temperament. Since many of the symptoms for which soldiers are referred arise from job dissatisfaction, use of tests for proper vocational placement is an extremely important aspect of the psychological program. It relates directly to the unit's main objective of making the most effective use of personnel.

Diagnoses, made by the psychiatrist, include practically all of the classical psychiatric categories. Fewer psychotics are seen because the service is primarily an out-patient one. In addition to diagnosis, adaptability to military life is also considered in determining the disposition. Only when adaptability is extremely poor is discharge considered.

Dispositions are of three kinds. Among referrals to the MHU, many were returned to duty, some were recommended for discharge, and a small percentage were hospitalized for further study. The category of *return to duty* consists of return to duty with further action, return to duty with reclassification or reassignment, and return to duty with therapy. When reclassification is made as a recommendation, the patient is referred to the psychologist who makes the necessary reclassification on basis of the patient's personality as indicated by the case record, his qualification card containing his history of civilian and military occupational history, schooling, aptitude and intelligence level. Job recommendations are made within the army framework as defined by army regulations. The procedures of reassignment and reclassification are outlined in the War Department regulations, memoranda, circulars and other documents and these serve as the guides for the psychologist. All the psychologists concerned with classification have attended the Army Personnel Consultant Schools.

Patients scheduled for therapy are treated by the psychiatrist and the psychiatric social workers. Reports of the Rorschach and the Thematic Apperception Test are most useful in this area. Occasionally the material from the Thematic Apperception Test is used as the starting point for extended therapy. Evaluation of therapy, mentioned earlier as one of the functions of the psychologist, might rather be designated as one of the *objectives* because of the difficulty in making this type of evaluation. The prime criterion of the effectiveness of therapy at the present time is the extent to which the symptoms are removed and adjustment to the army duty is made, or that adjustment to army duty is made despite the presence of symptoms previously felt to be disabling by the patient.

The research done by the psychology department is secondary to

the service needs of the unit, and is oriented towards solving practical day to day problems. Studies have included an analysis of the case histories of men referred to MHU, a test of the validity of the Harrower-Erickson Multiple Choice Test for screening, and the construction of a test for screening. There is a study in progress on the use of projective techniques for evaluation of therapy.

The psychologists participate in the training program for the unit's professional personnel, and have led several discussions on psychological problems at the weekly seminars. They take part in the bi-weekly staffing of cases.

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## A.A.F. CONVALESCENT-REHABILITATION PROGRAM

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The Army Air Forces Convalescent-Rehabilitation program is designed to receive Army Air Forces casualties from overseas and to provide for them a rehabilitation service. The service developed for these casualties includes both medical and non-medical aspects of rehabilitation. Those admitted to the Convalescent-Rehabilitation centers have, in most cases, already received definitive medical treatment at Army General Hospitals or A.A.F. Regional Hospitals. This selection excludes casualties such as the blind and psychotic.

It is the primary purpose of the program to return as many casualties as possible to their former military duty in the Army Air Forces. For those whose disabilities prevent their returning to their former duties, reassignment is made in accordance with their training, experience, and limitations. To those who are unable to achieve the minimum requirements for military duty, a Certificate of Disability Discharge (CDD) is offered.

The type of patient assigned to a Center determines the nature of the organization and program that is developed there. One Convalescent Center receives orthopedic, psychoneurotic, "operational fatigue," and general medical and surgical cases.\*

Each center is under the direction of a medical officer who supervises the organization of all activities. The Convalescent-Rehabilitation program for each patient is initiated through a combined medical, physical, psycho-social, and vocational-educational evaluation. The program for the individual, therefore, takes into account medical-surgical needs, physical limitations, psycho-social problems, the individual's interests and abilities, his goals and attitudes, the probable length of the convalescent period, and the nature of his probable disposition. The activities program based on these considerations includes athletics, recreation, physiotherapy, individual and group psychotherapy, educational classes and projects, specialized vocational training, job trial, a physical-fitness program, and entertainment. The various coordinated activities shorten the convalescent period for each patient and, at the same time, prepare him for new military duties or to take his place in civilian life.

The complete vocational-educational evaluation of each patient is made under the direction of the Vocational Guidance Officer. Future assignment is recommended on the basis of this evaluation. The patient receives instruction in subjects related to this assignment, and is given

\* At this writing there are three psychologists assigned to this Convalescent Center and two assigned to a branch located in the same state.

job trials whenever possible. In the case of patients who are to be returned to civilian life, the evaluation is directed toward the proper placement of the individual in civilian employment. Each patient is instructed concerning the agencies which will assist him in his return to civilian life. Particular emphasis is placed on available channels and opportunities for job placement.

The clinical psychologist contributes to many aspects of the total program. He is concerned primarily with the psycho-social adjustment of the returned soldier. He conducts therapeutic group discussions and counsels individuals on adjustment problems. The group therapy is designed to meet the problems of overseas casualties who face readjustments to non-combat conditions in the United States. This type of therapy is conducted in small, informal groups. Here the individual, under the leadership of the psychologist, discusses attitudes and problems developed as a result of his overseas experiences, his present and anticipated problems of readjustment, and current socio-economic issues. The psychologist also contributes by counseling soldiers about to be discharged from the service. One of the problems to be met by this group is that of the disabled veteran returning to his home and family. In addition, the returning veteran must be prepared to accept intelligently the responsibilities and freedom which will be his in civilian life.

By means of brief interviews with all new patients, the psychologist screens those presenting adjustment problems. In addition, cases are referred to him by the medical consultants. As individual counselor, the psychologist performs duties which include case-history studies, psychotherapy, diagnostic testing, and the development of individual rehabilitation programs for patients presenting special problems such as illiteracy and aphasia. In this connection, the psychologist comes in contact with cases involving psychoneurosis, "operational fatigue," constitutional psychopathic states, psychosomatic disorders, brain injuries, situational anxieties, and conversion hysterias. For those cases in which a long-term or extensive psychotherapy is indicated, the psychologist conducts counseling ranging from the non-directive type for complex personality problems, to more directive counseling of a social-psychiatric case-history nature for cases involving situational reactions. These psychiatric cases have all received initial diagnoses by military psychiatrists, and the individual case-work must be done under the supervision of the psychiatrist.

Another related function the psychologist performs is the administration and interpretation of diagnostic tests. The results of these tests are used for evidence in establishing diagnoses, measurement of progress, and as a guide for clinical procedures. Tests used in this area include

individual intelligence tests, personality tests, memory and deterioration tests, and special tests for diagnosis of organic brain pathology.

Individual intelligence tests used by the Center are the Bellevue-Wechsler Mental Abilities Scale, Form B, and the Stanford-Binet, Form L. The Kent Emergency Tests, the Otis Self-Administering Tests of Mental Ability, and the Modified Alpha Examination (Form 9) have been employed when only a rough index of mental ability was required. The personality tests that have proved profitable are the Rorschach, Murray's Thematic Apperception Test, and the Minnesota Multiphasic Personality Inventory. The Wells Memory Tests, the Wechsler Memory Scale (unpublished) and the Shipley-Hartford Test have been used for the study of memory and mental deterioration. The Bender Visuo-Gestalt tests, the Goldstein Blocks, the Porteus maze, and the tests as outlined by Weisenberg and McBride for aphasic disturbances have been used in cases of suspected organic brain pathology.

The psychologist contributes to the vocational-educational aspect of the rehabilitation program by administering and interpreting tests of aptitude, achievement, vocational interests, intelligence, and personality. The tests are usually administered individually at the request of the Vocational Guidance Officer.

In addition to the tests described in the previous paragraph that are applicable to this area, use is made of the Kuder Preference Record, Strong Vocational Interest Blank, Army General Classification Tests, Minnesota Paper Form Board, American Council on Education Tests, and the Stanford Achievement Tests.

Under the direction of the clinical psychologists, a library of testing materials, periodicals, and standard reference works related to the psychological aspects of rehabilitation is being collected for use in the Center. Additional tests are needed to meet specific problems, and many others could be used experimentally in order to determine their value in the Convalescent-Rehabilitation program. Tests listed in this paper are not presented as an ideal testing battery but represent the tests that could be secured and put to immediate and profitable use.

## CLINICAL RESEARCH IN THE AVIATION PSYCHOLOGY PROGRAM OF THE ARMY AIR FORCES

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Until May, 1944, practically all of the work of aviation psychologists in the Army Air Forces was in the Training Command. Descriptions of their activities have appeared in recent issues of the *Bulletin* (1, 2, 3, 4, 5, 6). During the first two years the emphasis was on research for the development of instruments for the selection and classification of large numbers of candidates for air-crew training. During the past year, however, there has been an increasing emphasis on new types of research and service, particularly on problems of training methods, instructor selection, selection of flying personnel for key positions in combat, and the redistribution and rehabilitation of returnees.

These newer efforts have also been characterized by an emphasis on objective, large-scale procedures, on machine-scored paper and pencil tests, clock- or counter-scored apparatus tests, and the statistical treatment of grades, ratings, bombing scores, and similar quantitative data. The contributions of psychologists in the Air Forces have thus been primarily in the field of measurement rather than therapy. However, clinical methods have played an important part at certain points, especially in the development of a number of objective tests and in the evaluation of certain training and assignment procedures. A few of the more significant studies utilizing clinical psychological methods are briefly described in this paper.

### CASE STUDIES OF PILOTS IN TRAINING

Fundamental to any program of personality test construction is the availability of adequate studies of men who fall into the classifications to be predicted, in this case, those who succeed and fail in flying training. Accordingly, Psychological Research Unit No. 1, Maxwell Field, Ala., (Sept. 21, 1941 to July 7, 1942, and since March 15, 1944) and Nashville, Tenn., whose research mission is the development of personality and temperament tests for the prediction of success in flying training, sent a detachment to a primary flying school to make a job and man analysis of pilot training. One officer (Capt. Neal E. Miller) was responsible for job-analysis, the other (Capt. Donald E. Super) for case

\* The author was selected by the Psychological Branch, Hq. AAF, to write up these projects because of his participation in several of the researches and familiarity with the others. The responsibility for the details of the research described rests with the project personnel.

studies; they were assisted by an enlisted psychologist (S/Sgt. John L. Wallen) who kept records and tested and interviewed the cadets being studied.

*Procedures in the Field.* The procedures in the clinical phase of the work were as follows. The two officers entered primary flying school with a new class, and were quartered in different barracks, with two different flights of 28 men each. Although both officers were to some extent participant observers, the job-analyst made observations on only a few individuals (devoting more time to flying and job-analysis interviews), and the man-analyst observed all of his flight of 28, studying most of them intensively as a participant observer. He followed the same schedule as his subjects, eating, going to ground school and calisthenics, flying, handling planes on the ramp, and going on open post with them.

Although the officers wore their insignia and the cadets observed the usual military courtesies, excellent rapport was established. At the cadets' first orientation meeting, the Commandant of Cadets briefly introduced the psychologists and explained their mission as one designed to improve classification procedures, one which would not affect the standing of the present class in any way. The detachment saw to it that their behavior supported this statement; for example, during the first day cadets soon forgot the presence of the officers and occasionally made critical remarks concerning the school, then remembered the observers. When these slips resulted in no reprimands, confidence grew. Soon the observers were completely accepted, as many little incidents testified, including the bestowing of free membership in the "Short-Snorters," tossing in the showers after the first solo, and exchanges of letters since graduation.

Twenty cadets were singled out for special study, the enlisted psychological assistant making a preliminary selection on the basis of stanines (flying aptitude scores) in order to get samples of high and low aptitude cadets, and the officers making suggestions on the basis of observations with no knowledge of the stanines. The assistant interviewed each of these cadets after they began taking their pre-solo checks and some were about to be eliminated (after about two and one-half weeks), and then administered Murray's Thematic Apperception Test. The interview lasted one hour or more and, while it allowed the cadet a good deal of freedom to talk as he pleased, covered family history, education, job experience, attitude toward war and flying, and the other usual items of a clinical history.

The officers kept notes on the observed behavior of their cases, jotting them down at convenient moments. Data were thus obtained in situations ranging from inter-changes in the washrooms, through

critiques by instructors after flying, to scraps of talk and exclamations while asleep at night. Cadets were frequently engaged in conversation before and after check flights and were thus, unbeknownst to themselves, interviewed concerning their flying behavior and attitudes at critical times. Their instructors were also interviewed, more formally.

Six weeks were spent in these activities in primary school. The two officers went to basic and advanced flying schools for periods of about one week each while the same cadets were there. Similar participant-observer and clinical-interview techniques were used, supplemented by group interviews which proved very successful in eliciting frank reactions to flying, and by analysis of instructors' flight reports.

*Preparation of Histories.* The detachment then returned to its home station and began the analysis of case material and the preparation of case histories. Each observer summarized his own observations, interviews, or test data; ground school grades and flight reports were analyzed; and, in a case conference lasting as long as four hours for the first few cases, but generally a little over an hour thereafter, the three clinicians discussed and agreed on a diagnosis of each case. The responsible officer then wrote a case summary of about two thousand words which was revised and discussed by each clinician until agreement was complete. A description of the training experience, one complete case history and all of the summaries, were then published as restricted research bulletins.

*Analysis of Case Histories.* The officer in charge of the man-analysis study then began a listing of the personality factors in each case, and of their effect on success and failure. After several revisions this list was used by two psychologists, working independently, to tabulate the incidence of personality factors characterizing graduates and eliminated. These tabulations were shown to be quite reliable. Although the total number was small (8 graduates, 11 eliminated, and one reclassified as navigator at own request), tentative conclusions were drawn which have proved helpful in test construction. More important still, dynamic pictures of the complex relationships between personality factors and success in flying training were made available to aviation psychologists, few of whom have had first-hand experience with flying training.

*Conclusions.* Outstanding general conclusions of the above studies were that going through pilot training is an experience full of emotional stress, that cadets who are emotionally insecure as a result of childhood experiences are less likely to succeed than are others, and that such insecurity may be turned into an asset or at least counteracted by emotional control. This, in turn, is in part indicated by habits of success, a happy marriage and a good adjustment to authority. Questionnaire studies have shown that coming from a broken home has no effect on

chances of success in flying training, which seems to cast some doubt on the above conclusions. However, civilian studies have repeatedly shown that it is *psychological* rather than *material* break-up which is important to adjustment. As the case studies dealt with the former, and the questionnaire with the latter, the conclusion still stands.

#### CLINICAL EVALUATIONS OF AVIATION TRAINEES

After objective tests had been devised, validated, and put into use for the classification of candidates for aircrew training, certain aviation psychologists at Psychological Research Unit No. 1 were interested in investigating the predictive value of clinical diagnostic techniques, and, in a few instances, of a *clinical evaluation* of the data which might affect success or failure as opposed to the *statistical* combination of test scores in a regression equation.

*Interviews.* One study of the predictive value of interview procedures had already been carried out by Pvt. Albert Lehman with negative results. In this first study 110 cadets were interviewed in a relatively unstructured interview lasting 15 minutes. Each cadet was rated on eleven categories, varying from "Anxiety" to "Estimate of proper placement in aircrew duty." Criterion data later became available for 60 graduates and 25 eliminated. Although the ratings were quite reliable (agreement between two judges), they had no predictive value; the estimate of aircrew placement, for example, had a validity of .02 for pilots. It was felt, however, that the possibilities of the interview had not been exhausted, and that it should be tried in a more lengthy, more clinical form, together with other clinical techniques.

*Clinical Ratings.* Accordingly, a standardized clinical interview lasting about an hour and dealing with past history and present personality, the Rorschach Psychodiagnostic, Murray's Thematic Apperception Test, several observational techniques involving performance of a set task or behavior in an unstructured situation, and a variety of experimental objective personality tests were used under the direction of Lt. John W. M. Rothney, with some 600 aviation cadets. After completing the recording and review of his data, each clinician (selected enlisted psychological assistants with appropriate graduate training and experience in psychology but, with one exception, no first-hand knowledge of flying) rated each examinee's chances of success in training as pilot, navigator, and bombardier. This rating was thus based solely on an evaluation made after the administration and review of one test or interview, and on the clinician's knowledge of the requirements of aircrew training. A total of eleven ratings were made, based on approximately four hours of testing and three hours of scoring per cadet (the latter estimate is very rough, due to changes in procedures as work

progressed). Eight of these ratings (interview, Rorschach impression, Thematic Apperception Test, observation during rest period, Adams-Lepley Personal Audit, confidence ratings, Behavior Preference Blank, and Self-Crediting Mental Abilities Test) subsequently proved to have no predictive value, while three of the ratings, based on the Rorschach interpretation and on the Interaction and Observational Stress Tests (ratings of behavior in set tasks), had very doubtful validities.

*Rorschach Scores and Behavior Ratings.* A second phase of the research consisted of the validation of test scores and part scores. One Rorschach category had a doubtful validity which did not hold up in cross-validation, and no others had any predictive value; inadequate standardization of examiners' procedures made Thematic Apperception Test data unusable for this purpose; ratings of observed behavior (co-operation, leadership, emotional stability, etc.,) had no validity ( $r_{bis}$  from  $-.171$  to  $.132$ ); and a scoring formula for statistically selected Rorschach categories did not validate on a new sample of 156 cadets ( $r_{bis} = .035$ ). The Harrower-Erickson multiple-choice group edition of the Rorschach was later administered to 2000 cadets, but also proved to have no predictive value.

*Prediction on the Basis of Case Studies.* It was originally planned to make predictions on the basis of complete case histories utilizing validated clinical techniques. This was rendered impossible, however, by the lack of predictive value in the clinical instruments.

#### PROJECTIVE TECHNIQUES

*Individual Tests.* Although the Rorschach Test, used without reference to case history material, was demonstrated to have practically no predictive value for air-crew training, and the only Thematic Apperception Test data available proved unworkable (see above), the conviction has been strong among some aviation psychologists that projective techniques should be of value in air-crew selection and classification. Before either of the above tests was administered, work had been carried on at Psychological Research Unit No. 1 with the Titles Test, a series of aviation and army pictures with multiple-choice thematic responses. This work with individual techniques paved the way for work with group tests.

*Group Tests.* Current work with projective techniques at Psychological Research Unit No. 1 consists of several tests, now about ready for validation, growing out of work with the Titles and Thematic Apperception Tests. These have in common the brief presentation of a picture, after which the subject makes a choice from verbal or graphic multiple-choice items. They are designed primarily for the prediction of neurotic reactions to the stresses of flying training and of combat.

Further work of this kind is being carried on at Redistribution Station No. 2 for the screening of cases of combat fatigue and combat neurosis among returned fliers.

#### ADJUSTMENT AFTER COMBAT

**Problem.** Experience with aerial gunners returned from combat theaters after completion of the standard number of missions, and assigned to duty as gunnery instructors, revealed many problems in the adjustment of returnees to army life in the United States. Accordingly, Psychological Research Unit No. 11, located at the Central Instructors School for Flexible Gunnery and specializing in gunnery problems, secured the services of a civilian consultant (Dr. Carl R. Rogers) for the making of a study of the general problem of the adjustment of returned combat gunners.

**Method.** Three clinical psychologists used relatively unstructured procedures to interview one hundred returned combat gunners. Preliminary interviews were used to develop a guide to the areas to be explored. The research interviews lasted from forty-five to seventy-five minutes, notes were taken during the interview, and an Interview Analysis Blank was filled out after a study of the notes. This last procedure served to quantify data and to facilitate the analysis of inter-relations.

**Findings.** Specific findings cannot be released for security reasons and because of their tentative nature. An indication can be given, however, of some of the problems studied. These included attitudes toward assignments (job satisfaction), effectiveness of instructor selection methods, incidence and effect of combat fatigue, and factors related to susceptibility to combat fatigue. Recommendations were made for the improvement of assignment and training procedures.

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## THE PSYCHOLOGIST IN THE PSYCHIATRIC PROGRAM AT THE NAVAL TRAINING STATIONS\*

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The main task of a Psychiatric Unit at a Naval Training Station is military selection, the detection of those recruits who are neuropsychiatrically unfit for Naval Service. The psychologist's mastery of objective testing techniques renders him a valuable aid to the psychiatrist in this task. The psychologist's function, however, is not limited to testing and he has many opportunities for exercising clinical judgment in the usual sense of the term. As Louttit has pointed out, the original directive setting forth the duties of the psychologist in a Psychiatric Unit mentions specifically the necessity of supplementing test scores with clinical interview and the interpretation of social histories.

It must be remembered that clinical psychological examinations must go beyond the mere securing of numerical scores. Such scores have meaning only insofar as they are interpreted in the light of the examinee's personal reactions, his history, and his attitudes. The psychologists selected for work in the Medical Corps will have had considerable training and experience in interviewing, counselling, the interpretation of social histories, as well as of strictly psychological tests. Therefore, their findings should prove a valuable supplement to those of the psychiatrists (14).

A later directive refers to the psychologist as functioning as "an adjunct" to the psychiatrist. Standard dictionary definition of this term ranges from "a person joined to another in some duty or service, colleague, associate," to its use in logic to signify a non-essential quality. As far as I am aware the latter interpretation has never been applied either in theory or in practice to the training station psychologist.

The specific details of the various training station programs have been set forth elsewhere (2, 3, 4, 11, 12, 17) and there is no need to repeat them here. The directives have wisely allowed for minor individual differences in approaching the general problem of military selection. Certain general problems stand out, however, and are worth notice.

All the present Training Station psychiatric programs emphasize a brief preliminary screening in order that some recruits with possible neuropsychiatric difficulties be isolated for further careful study. In this preliminary screening the psychologist meets his first problem, that of shortening the time consuming standard individual and group tests in order that a great number of men may be tested in a brief space of time. This problem has proved surmountable and it has been possible

\* The opinions or assertions contained herein are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the Naval Service at large.

to construct brief tests of intelligence which meet the demands of rapid administration without too great sacrifice of reliability and validity. Again the solutions have been individual and various, a fact which in itself is extremely encouraging. Both individual and group tests have been evolved which make possible quick but fairly accurate judgments of intelligence in less than 10 minutes (1, 5, 9). The results suggest that such brief instruments may well have an important later contribution in civilian mental hygiene clinics after the war. In such civilian work the cry is often raised that demands are so great that it is impossible to meet them with the available clinical facilities. The assumption, and it is certainly a sound assumption on an idealistic ground, is that such facilities should be expanded. On practical grounds, however, civilian clinics may well be able to copy from the military service and meet some of the problems of demand by streamlining their present techniques.

Once it is decided that a man needs further attention he is given a more careful examination, in most cases while he is being held on an observation ward. Here the psychologist is able to, and should, use the longer techniques of standard practice. Once again the official directives have wisely permitted individual choice in the instruments used. The psychologist will often find this testing more complex and exacting than that of civilian practice. Most of our intelligence tests have been standardized upon large homogeneous groups, too often selected from large, urban, juvenile school populations. In the military situation the psychologist meets the problem of testing *adults*, adults whose cultural and educational background often handicap them in performing adequately on the standard tests. Such special problems as illiteracy, the diagnostic value of test scatter, and attempted malingering will plague the examiner. Experience has shown that these problems can be handled by objective techniques and that the psychologist's training in scientific investigation will enable him to produce creative solutions. (6, 7, 8, 10)

The psychologist is also expected to exercise his talents in the evaluation of temperament and personality. Here he will find even greater need for creative thinking than he will in the field of measuring intelligence. The official directive recognizes the difficulties involved and does not limit the psychologist to specific tests. In practice he will find it necessary to call upon most of the standard techniques of personality testing. Personality inventories and projection tests such as the Rorschach and the Thematic Apperception will all be needed, and the Naval psychologist should be well grounded in them. The special need for research in this field was recognized in the following words from the original directive—"From the very beginning the psychologists should

undertake to collect data on such scales which can later be studied in relation to the psychiatric findings and service records for purposes of establishing validity."

Before any man is discharged from the Naval Service his case must be reviewed by an Aptitude Board which consists of a regular line officer, a non-specialist medical officer, two psychiatrists, and a psychologist. In this judicial function the clinical ability of the psychologist receives further recognition and he is allowed to exercise his judgment and to cast his vote on the basis of the total clinical picture and not on the mere test scores.

Electroencephalography has become increasingly important in certain training station diagnostic procedures, especially in the fields of epilepsy and post-traumatic personality disorders (16). Psychology has played an important part in the introduction and development of electroencephalography in this country. The psychologist's interest in apparatus and laboratory procedures, particularly those involving electronics made this inevitable. It is only natural that he should become involved in its use in naval psychiatry and in many of the training stations the electroencephalographic work is handled either entirely or in part by the psychologist. The final interpretation, of course, rests with the psychiatrist as it must where a question of medical responsibility is involved.

There have been many other incidental aspects of training station psychiatry with which the psychologist has become identified. His thorough grounding in experimental design and procedures has made him serviceable in research investigations many of which lie outside the strict field of psychology. Moreover, his understanding of and training in statistical procedures has proven of great use.

All in all the activities of the psychological members of any training station psychiatric unit (or one might say the duty of a psychiatric "adjunct") are limited more by the professional training and by the ability and the adaptability of each individual psychologist than they are by official directive. In reading Louttit's analysis of 400 psychologists commissioned in the Naval Service (13), it is interesting to note that a larger proportion of the psychologists assigned to training station psychiatric units have PhD's than those assigned to other strictly psychological tasks such as service in the Bureau of Personnel, in Selection work or in Aviation Psychology. To the psychologist entering a psychiatric unit at a training station the Navy offers a great opportunity for clinical experience as well as patriotic service. That these psychologists have filled a definite need is attested to by the steady demand for them.

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## THE CLINICAL PSYCHOLOGIST IN A NAVAL HOSPITAL

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The course at Midshipmen's School which has twice as much weight as any other course in determining the future status of the would-be naval officers is Naval Organization. It seems fitting, therefore, to begin a report on the work of a naval clinical psychologist by trying to locate his position in the naval organization. There are seven bureaus in the Navy Department. Hospitals come under the Bureau of Medicine and Surgery. The officers under this bureau fall into five classifications: medical, dental, hospital and nursing corps and the Volunteer Specialists branch of the Naval Reserve. Clinical psychologists are in the last named class and along with many other specialists such as biochemists, physiologists and entomologists are designated H-V(S) for men and W-V(S) (H) for women. They wear the caduceus as their corps insigne.

The naval hospital, like any large hospital, is divided into various services, including neuropsychiatry. The clinical psychologist is a regular member of the staff on this service. Unlike other members of the service, the work of the psychologist is not confined to any one ward. He acts as consultant not only for the neuropsychiatric service but for the whole hospital and occasionally even examines out-patients. Consultation requests are made on the regular forms used for all kinds of consultations. Since most of the medical officers are reserve officers, the number and type of requests each makes, and the use he makes of the psychologist's reports, varies a great deal depending upon his previous training, experience, and personality, as well as upon the particular problems of the Navy.

The types of patients appearing on the neuropsychiatric service of a naval hospital are not essentially different from those found at a civilian psychopathic hospital, except that most of them are relatively young males. For this reason, arterio-sclerotics, seniles, general paretics and involutional melancholias are rare.

The principal problems on the neuropsychiatric service of a naval hospital are more those of diagnosis and disposition than of therapy, although there seems to be more interest in therapy than when the psychologist was first attached to the staff in February 1943. Disposition may consist of return to full duty, return to limited duty, transfer to St. Elizabeths Hospital, discharge from the navy, or return to the brig (in disciplinary cases awaiting court martial). Diagnosis is much more important than in civilian practice because it may determine, or at least influence, the type of discharge and the amount of future compensation. For instance, a patient with a diagnosis of chronic alcoholism

will be given a bad conduct discharge, thus jeopardizing his chances of obtaining benefits which may be given other veterans. Another problem not found in civilian hospitals is that of EPTE (Existence Prior to Enlistment). Some diagnoses, such as mental deficiency, are less apt to be considered as acquired in service than others and hence less compensatory. Many patients, especially among the women, make somatic complaints for which no organic cause can be found. If they are diagnosed "No Disease" and given an inaptitude discharge, they cannot claim compensation. If they are diagnosed psychoneurotic (without strong proof that it existed before enlistment and was not aggravated by service), they are given a good medical discharge and are entitled to all benefits. The diagnosis, therefore, becomes a matter of importance to all taxpayers because veterans may start filing claims before they even leave the hospital.

There are always a few feeble-minded who manage to get through the Induction Centers and avoid an inaptitude discharge at the Training Schools. When there is a question of adequate intellectual capacity, therefore, the patient is always referred for an intelligence test. Frankly psychotic patients in need of institutional care are usually sent to St. Elizabeths Hospital before they are seen by a psychologist. The vast majority of patients seen by the psychologist are borderline mental cases including many anxiety neuroses, hysterias and psychopathic personalities. Some have developed their present conditions after heavy combat duty; others have blossomed forth as early as during the train ride to Boot Camp. Since personality and emotional adjustment are often more important than intelligence in judging the ability of the man or woman to adjust to military life, the Rorschach is frequently requested.

Simple achievement tests such as reading and spelling are sometimes given. Since the Navy has taken draftees, illiteracy is not always ruled out at the Induction Center. Here, as in civilian clinics, an occasional man is found who is intelligent enough and has attended school for a number of years, but cannot read. Since women are required to take a written aptitude test before they are accepted, no feeble-minded or illiterate women have been referred for examination as yet. Incidentally, since women do not have the threat of being drafted into the Army if discharged from the Navy, or the same social pressure to be in uniform as the men, they are less hesitant than the men about trying to get out of the Navy via the psychiatric service if they find the military life interfering with their personal liberties and pleasures.

Occasionally the case referred is one in which there is a question of mental deterioration or inadequate mental functioning. This is especially true of cases with organic brain damage. For instance, one man

a high school graduate, was referred from neuro-surgery with a large piece of shrapnel in his head. Although his vocabulary was still above average and he could use a pencil, he could not write very much because he could not remember how to spell. He had also forgotten most of his arithmetic. With a little daily help, he was able to make remarkable progress in relearning.

Thus, it is seen, the examinations given by the clinical psychologist in a Naval hospital consist of intelligence tests, achievement tests, personality tests and tests for mental functioning, much the same as in civilian hospitals. There are also staff conferences to attend. These differ from civilian conferences in so far as the military disposition, as discussed above, is an important factor. At the writer's hospital, the psychologist has had some teaching duties. These have consisted of giving an intensive two months training to WAVE Ensigns who have an under-graduate major in psychology but little or no graduate work or experience. Recently a three months course has been started for Navy physicians who wish to work in neuropsychiatry. The psychologist gives three of the daily lectures in this course and 24 lectures in the course for Occupational Therapists.

As described so far, the clinical and teaching duties of the Naval clinical psychologist are not very different from those of any large university hospital. There are, however, certain purely military duties. For members of the Woman's Reserve, these are probably more numerous than those required of the men, for instance, standing 24 hour watches at the WAVE Barracks in addition to other duties. Before WAVE officers were assigned to duty at the Barracks, the other WAVE officers on the station had to be Officer-of-the-Day about every three weeks. That meant being on duty from 8:00 one morning until 4:30 the next afternoon. Now the OOD duty usually comes only on occasional week-ends. At some hospitals, however, where there are few women officers, it may come every few days. Military discipline is exercised over all enlisted women who come under the cognizance of the officers. This consists primarily in such things as enforcing uniform regulations and military courtesy. Since the men, especially un-indoctrinated staff officers, are inclined to be very lenient with the women under their jurisdiction, there is more disciplining to be done by the women officers than would otherwise be necessary.

A final duty of the psychologist is to interview all women on the neuropsychiatric service who are being discharged from the service. Previously, when women were given inaptitude discharges from the hospital, this included collecting the Navy insignia, buttons and hats before the patient left the hospital. Now, since only medical discharges are being given to women at the hospital, it is not necessary to make any

such collections. The women are seen, however, in an attempt to have them leave the service with definite plans for the future, and to assure as desirable an attitude toward the service as possible.

In general, it may be said that the psychologist's duties in the Naval hospital are much the same as in a civilian hospital. Exceptions to this result from (1) the preponderantly young adult male population, (2) the military characteristics of the disposition of cases, and (3) the necessary additional military administrative work.

## PSYCHOLOGIST IN THE NAVAL HOSPITAL

T. W. RICHARDS, LT. COMDR. H-V(S) USNR

Louttit's recent article (1) on placement of psychologists in various branches and activities of the Navy showed that a few were assigned to Naval Hospitals. All these were of the H-V(S) or W-V(S)H USNR classes—attached, that is, to the Medical Department. To my knowledge assignment of psychologists has been made to hospitals only within the continental United States.

My understanding of the activities of psychologists at Naval Hospitals derives almost entirely from personal experience while on duty at the USNH, Mare Island, California. There are few directives or precedents established which serve to limit or define the functions of such psychologists. It may be said, I think, that their duties are essentially clinical and associated for the most part with the work of the neuropsychiatric service of the hospital. This work is principally the evaluation and disposition of neuropsychiatric cases. Functioning as a consultant to the psychiatrists who act as ward medical officers, the psychologist renders service largely by request; he has few routine duties.

In any Naval Hospital it is necessary to appraise all neuropsychiatric cases in terms of potentiality for further adjustment to the service. In some cases, therapeutic procedures might be indicated. In others the only possible disposition may be discharge from the service. In all cases, however, longitudinal study of the individual case is required in order to interpret correctly the facts pertinent to the current admission to the hospital.

A measure of mental capacity is important in any case of maladjustment to naval service. When mental deficiency cannot be ruled out by reviewing the patient's history, a test such as the Otis will show quickly that the man's capacity is adequate, or that he needs more individualized psychometric study. The diagnosis of mental deficiency cannot be made on the basis of a group test; individualized study is a requisite to rule out illiteracy, verbal deficiency, or motivational factors. Simple mental deficiency is, of course, disqualifying for naval service, and in such cases the results of the psychologist's measures are important in confirming the history of maladjustment in establishing the diagnosis.

Recognizing inconsistencies in pattern in tests of mental capacity often suggests the possibility of intellectual deterioration and the need for further study to detect psychotic or organic factors. In such follow-up, the Shipley-Hartford Retreat Scale is useful, but, because for the Navy it is pitched at a fairly high intellectual level, a more frequently useful index is the comparison of the performance on the block designs

and on the verbally administered vocabulary or information tests. In our hospital, the Rorschach was always used where deterioration was suspected (as well as to get at psychoneurotic factors), and it usually served to emphasize either an organic or psychotic trend. In cases where psychosis was suspected, particularly at the lower intellectual levels, the Healy Pictorial Completion II, used qualitatively, often led to highly interesting clinical findings, particularly regarding the patient's logic in selecting bizarre objects to complete the pictures.

Ruling out mental deficiency, psychosis and organic factors, with the psychoneurotics the problem was usually one of detecting anxiety, and of evaluating hysterical or compulsive tendencies. Here the Rorschach and the other projective devices were highly useful, and for purposes of laying a groundwork for interview the Minnesota Multiphasic Personality Inventory proved valuable.

It would be erroneous to infer from these brief comments about tests that the psychologist's task is limited to psychometrics. The psychometric picture alone, no matter how well it is interpreted, is insufficient to present any case completely, and although it is the task of the psychiatrist, rather than the psychologist, to evaluate symptoms and psychogenesis, he is usually grateful to the psychologist for any clinical material the latter may provide. One must have the facts about epileptic seizures, for example, or a record of instances of sexual deviation, in order to substantiate the proper diagnosis.

Psychologists in civilian life may wonder whether in the naval service the nature of psychological practice is essentially different. A Naval Hospital such as that at Mare Island is not greatly comparable to a civilian hospital in that the roster of patients there included not only psychotic and severely neurotic patients, but many psychopathic cases which are found, in civil life, more frequently in courts and penal institutions than in hospitals.

Considering the limitations in age range and the predominance of male patients, the problems to be met in naval service are similar to those met in civilian practice. Obviously, because of combat, there are greater numbers of cases in which a catastrophic incident precipitated the current admission to the hospital, but I do not feel that *psychologically* these cases differ from the traumatic neuroses of peace time. I feel further that emphasis on this point is highly important to the patient therapeutically in minimizing the "service-connected" concept in his thinking.

The exigencies of military life aside from combat undoubtedly produce a greater frequency of cases such as severe homesickness and sexual deviation, and reveal instances of maladjustment to military life traceable to rigidity of the personality.

In addition to clinical evaluation of neuropsychiatric cases, the psychologist may have incidental personnel functions, such as testing of staff, administration of tests qualifying for submarine duty, or of the Navy's General Classification Test for eligibility for special training. Recently the hospital at Mare Island has emphasized a program of re-education of battle casualties where one or more limbs are lost. The psychologist has been consulted in these cases for purposes of evaluating aptitudes and vocational interests.

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## PSYCHOLOGICAL ACTIVITIES AT THE UNITED STATES COAST GUARD ACADEMY

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### I. DEVELOPMENT

*Program.* A combined medical and psychological program in which psychologists play an integral role has been developed at the United States Coast Guard Academy (2). This activity appears to be the first integrated and systematic combined medical and psychological program of its kind to be developed at any military academy in the United States. It has certain unique features in connection with the methods utilized for the evaluation of officer candidates. The program originated with the following functions in view:

- a. To assist in the selection of suitable officer candidates,
- b. To teach Coast Guard Cadets such understanding of human behavior as would be applicable to personnel problems, and
- c. To develop skills in officers which would aid them in the evaluation of their men.

The program has developed mainly around the functions of evaluating two groups of officer candidates:

- a. Regular Cadets, preparing for a career as officers in the Coast Guard, and
- b. Candidates for commissions as Reserve officers.

The latter group contains both men and women. Recently, the Reserve Training School (training male candidates for Reserve commissions) has been discontinued, and an Officers' Training School (advanced work for commissioned officers) has been established. This has added to the program the function of aiding in the evaluation of commissioned officers. The combined medical and psychological program has also been concerned with all other personnel stationed at the Academy (officers and enlisted men) and their families.

### II. RELATIONSHIP OF PSYCHOLOGISTS TO ACADEMY ORGANIZATION

Rear Admiral James Pine, U.S.C.G., Superintendent of the Academy, and his staff have been extremely understanding and cooperative with regard to the combined medical and psychological program. Administratively, the psychologists are in the Medical Department of the Academy, with offices located in the Hospital, and are directly responsible to the Senior Medical Officer. Thus, the work of the psychologists is integrated with that of the psychiatrists and other members of the Medical Department. The whole program is carried out in collaboration with the officers in charge of the training activities.

The organizational arrangements have contributed to the efficiency of the program and to its development on a sound basis. The centralization of the collection and interpretation of medical and psychological data has assured that these data would be rendered intelligible and would be utilized. Such an organization has also made possible a completely professional program with qualified psychiatrists and psychologists performing all aspects of the work. Since the combined medical and psychological program is part of the Medical Department's functions, health records and other relevant medical data are available. The research and statistical work necessary for the development of the program is carried out by the psychologists and psychiatrists. It may be seen that all of the program's personnel have intimate knowledge of all its phases.

### III. DUTIES OF PSYCHOLOGISTS

The evaluation of officers and officer candidates is built around two fundamental procedures: (a) psychological measurements and (b) interviews. There has been time for only a relatively small number of commissioned officers to report for training at the Officers' Training School. However, over four thousand officer candidates have been evaluated in the combined medical and psychological program. The majority of these have been male candidates for Reserve commissions, while female (SPAR) Reserve officer candidates furnish the second largest number. The Regular Cadets constitute the smallest number. The procedures of evaluation are undergoing a continuous process of development and refinement. In addition to the evaluation of officers and officer candidates, other areas such as counseling, psychotherapy, individual testing, fulfilling special assignments, and conducting discussions on psychological topics are covered by the combined medical and psychological program.

*Test Administration.* A battery of psychological measuring instruments was developed on the basis of analysis of the requirements of the various training programs.\* The battery administered to male candidates for Reserve commissions consisted of the following:

- a. a measure of scholastic ability, which yields separate scores for quantitative and verbal abilities;
- b. a measure of ability to perceive two-dimensional spatial relations;
- c. a vocabulary test;
- d. an adjustment inventory, measuring home, health, social, emotional, and occupational adjustment;
- e. a vocational interest schedule;
- f. a Personal Data Questionnaire (developed by Senior Surgeon R. H. Felix) designed to obtain information on the candidate's family background, health history, psychological condition, educational experience and attain-

\* Names of tests will be furnished to authorized persons upon request.

ments, occupational experience, recreational and leisure time activities and some self-evaluations of ability and personality characteristics; and  
g. the group Rorschach Test administered in collaboration with Surgeon D. C. Cameron.\*

The same battery of tests is administered to SPAR officer candidates, except that the test on spatial relationships is omitted.

The Regular Cadets receive the same test battery as the male Reserve officer candidates, with the following additions:

- a. a test of scientific aptitude,
- b. a test of ability to perceive tri-dimensional spatial relationships, measuring some aspects of engineering abilities,
- c. achievement tests in the fields of mathematics, natural sciences, and social sciences, and
- d. more detailed measures of personality characteristics.

As a basic battery, the commissioned officers receive:

- a. the scholastic ability test;
- b. the two-dimensional spatial perception test;
- c. achievement tests in the basic fields of Communications, Gunnery, Seamanship, and Navigation;†
- d. a personality test; and
- e. a version of the Personal Data Questionnaire especially adapted for officers.

*Interviewing.* Officer candidates are interviewed independently by a psychologist and by a psychiatrist. This furnishes independent judgments of the individual from two related but somewhat different points of view. Interviewing time varies from about ten to twenty minutes, depending upon the kind of candidates. The interview is performed with the Personal Data Questionnaire and all test scores at hand. The purpose of the interview is to evaluate the candidate's officer-like qualities, leadership, adjustment, and abilities; and to interpret his test scores. An attempt is made to appraise such characteristics as physical appearance, bearing, forcefulness, poise, animation, thought organization, verbal facility, relevant attitudes and interests, tact, emotional stability, social adjustment, and psychoneurotic traits. On the basis of the interview findings and test data the interviewer prepares a written summary of his evaluations and interpretations, and assigns an overall numerical rating. The ratings range from a low of 1 to a high of 5, and intermediate pluses and minuses are used. Officers, in contrast to officer candidates, receive only one interview of 20 to 30 minutes duration by either a psychologist or psychiatrist.

*Research and Test Construction.* In developing the various batteries of tests, commercially available tests were used whenever possible,

\* Dr. Cameron is conducting the analysis of the Rorschach Test results.

† These tests are based on items furnished by appropriate Academy Departments.

since this was the most practicable approach. Immediately useful results were needed so that measuring instruments of known characteristics were utilized. It has been necessary to conduct normative studies on these tests. Statistical studies of the validity of the tests have constituted a major aspect of the research. Item analyses and correlational studies are in progress, using such criteria as final overall standing, adaptability, and academic records. Probability tables have been developed on the basis of the psychological data to show chances of overall success or failure of candidates during training. It is hoped that the psychological measures may also be validated against the behavior and efficiency of the men in the fulfillment of their duties as officers. Research is being performed on the reliability of the interview as it is used in the combined medical and psychological program.

It is to be expected that some measuring instruments will be developed on the basis of the research outlined above. At present, the writers have constructed a vocabulary test for superior adults. A series of rating scales has been devised to aid training officers in reporting their interviews and adaptability judgments. An individual personality test has been adapted for group administration, and aid has been given in the various revisions of the Personal Data Questionnaire.

*Counseling, Psychotherapy, and Individual Testing.* Subsequent to the interview, as many as half of the persons in a class return individually to request information concerning their test scores, as well as for counseling or psychotherapy. A good deal of interest is displayed in the meaning of the test scores in relation to Service and post war adjustment. Requests for discussions of post war vocational selection, adjustment and education are quite frequent, but in-Service vocational adjustment is also considered. Problems of personality and marital adjustment receive considerable attention. Psychotherapy may be instituted for those individuals who display emotional tensions due to the pressures of the training program or to disturbing factors outside the Academy.

In addition to the individuals in training, the officers and enlisted men stationed at the Academy and the families of these personnel receive counseling and psychotherapy. Typically, problems of personality and marital adjustment, as well as the behavior problems or school adjustment problems of children, are given attention. Some of these individuals are referred to the psychologists by the physicians for psychological diagnosis, and in these cases many types of individual tests may be utilized. The psychologists are also asked to furnish information on the intelligence level, capabilities, and emotional stability of enlisted personnel whose suitability for continuation in the Service is under question.

In a good deal of the counseling and psychotherapy the psychologists work closely with the psychiatrists. This procedure is to be recommended, since it brings to bear on these problems the combined efforts of men trained in the two disciplines most closely related to such work.

*Special Assignments.* The officers in charge of the training programs may make requests for special services at any time. Such requests may be for data covering a particular class, for the comparison of several classes, for special studies of particular individuals, for statistical aid or advice, and for the preparation or aid in the preparation of special measuring instruments.

*Discussion of Psychological Topics.* The Regular Cadets or the officers in charge of the various training programs may request the psychologists to conduct group discussions or to lecture on such topics as are deemed relevant to the group involved.

The extensive character of the psychologists' activities in the combined medical and psychological program may be contrasted to the more specialized type of work demanded of psychologists in some of the other military units. Using the proposed "divisional organization of the reconstituted APA" (1) the psychologists are engaged in work falling in at least the following divisions: (a) Evaluation and Measurement, (b) Personality and Social Psychology, (c) Abnormal Psychology and Psychotherapy, (d) Clinical Psychology, (e) Educational Psychology, (f) Personnel and Guidance Psychology, and (g) Military Psychology. If the inter-related fields of Clinical Psychology, Evaluation and Measurement were defined broadly, these fields might cover the activities.

#### IV. PREDICTIVE VALUE OF PSYCHOLOGICAL MEASURES

*Methods of Analyzing Data.* Data are to be presented on the prognostic efficiency of (a) the interview ratings, (b) the combined scores on the tests of quantitative ability, verbal ability, and bi-dimensional spatial perception, and (c) the combined scores on the interview and the tests just enumerated. While the other tests mentioned previously will not be discussed, they are indirectly involved, since they are reflected in the interview ratings. The degree of success or failure during training in the Reserve Training School was used as the criterion against which the predictive value of the measures was checked. Achievement is measured in terms of both academic and adaptability records, and final class standing takes both of these factors into consideration.

Seven classes (about 1,900 cases) of male candidates for Reserve commissions were used in the study. These consisted of four consecutive classes who entered training between June and September, 1943, and three consecutive classes who entered training between November,

1943 and February, 1944. It is important to point out that the candidates were screened by the entrance requirements of the Reserve Training School. Civilians were required to have a college degree and six hours in mathematics, while enlisted men had to pass an ability test. This screening resulted in male candidates for Reserve commissions who were quite homogeneous with respect to scholastic abilities. They made a considerably higher average on the scholastic ability test than did male college freshmen, and the difference is highly significant. This increased the difficulties of differentiating between the men in order to predict probable performance during training. All of the candidates were given training in the Reserve School, regardless of the findings of the medical and psychological personnel. This furnished complete data for the study of the prognostic significance of the psychological measures used in the program.

Norms for the test scores and interview ratings were developed on the basis of the performance of the first five classes to attend the Reserve Training School in 1943 (about 1,350 cases). This group was considered typical of satisfactory Reserve officer candidate material. Using these norms, the test scores and interview ratings have been converted to T-scores so that they could be conveniently compared and combined. T-scores on the three ability tests were averaged, and the resulting scores were arranged in deciles (called ability deciles) based on the seven classes which are the subjects of the present study. The T-scores on the two interview ratings were averaged, and arranged in deciles (called interview deciles) on a similar basis. To combine the ability test scores and the interview ratings, the T-scores on the three ability tests and the two interview ratings were averaged and similarly arranged in deciles (called interview-ability deciles).\*

In order to determine the predictive value of the measures, the officer candidates were classified into four groups on the basis of their achievement in the training school: (a) the upper 15 per cent of the entire group in terms of final class standing; (b) all other successful candidates (called the Remaining Successful Group); (c) the Total Successful Group (group a plus group b); and (d) the Failures. Each of the ability deciles, the interview deciles, and the interview-ability deciles has been broken down to indicate the percentage of each of the achievement groups which it contains.

*Results.* The composition of each of the deciles based on the average T-scores of the interview-ability measures is shown in Figure 1. There is a direct relationship between standing on the combined interview-

\* In some cases where it was administratively impossible to have more than one interview, it was assumed that a second interview would have been the same, thus giving the interviews the same weight for all cases in determining averages. A study of the agreement between interviewers will be published later.

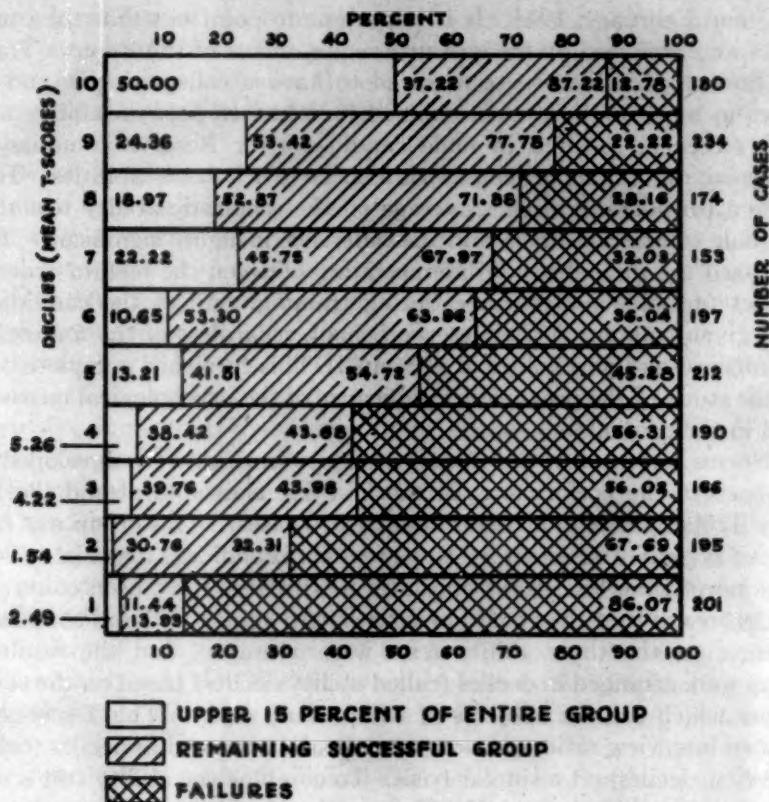


FIG. 1. FINAL ACHIEVEMENT LEVEL OF INDIVIDUALS OF EACH INTERVIEW-ABILITY DECILE, T-SCORE MEAN OF INTERVIEWS AND ABILITY TESTS, 1,902 CASES.

Numbers in the differentiated areas show the percentage of the individuals in a given interview-ability decile who fell in the four groups based on achievement in the Reserve Training School. The first number in the single hatched areas represents the percentage for the Remaining Successful Group only. The second number in these areas represents the Total Successful Group (upper 15 per cent of entire group plus the Remaining Successful Group). The T-scores are based on the norms for male Reserve officer candidates. The deciles are based upon the subjects of the present study.

ability measures and the achievement attained in the Reserve Training School.

Figure 2 compares standing on interview ratings with the final achievement level of the officer candidates. The two lowest deciles are combined in this figure, due to the piling up of scores in the lower end of the distribution of interview ratings. The direct relationship between interview ratings and final class standing is clear. This rela-

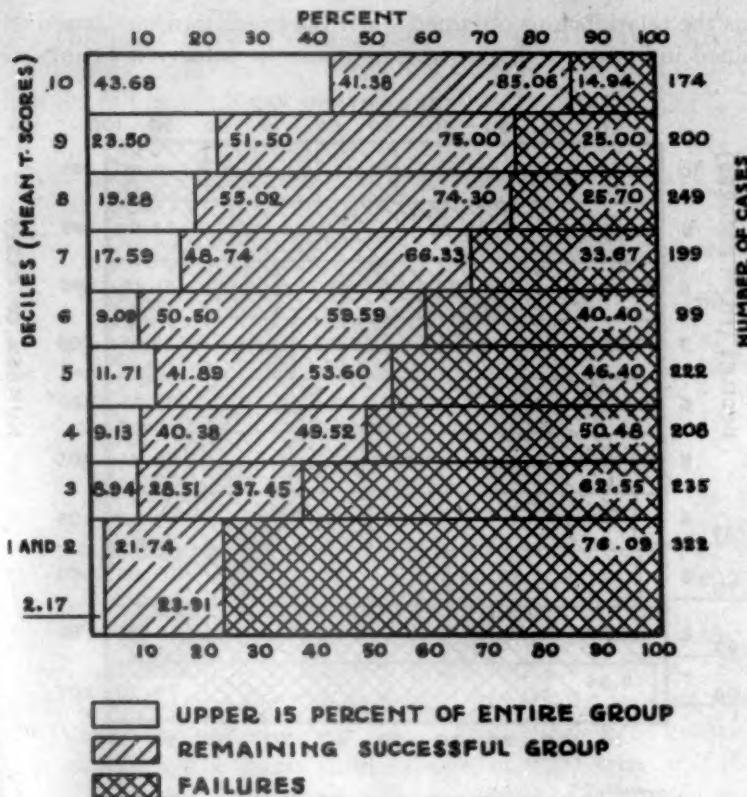


FIG. 2. FINAL ACHIEVEMENT LEVEL OF INDIVIDUALS OF EACH INTERVIEW DECILE, T-SCORE MEAN OF INTERVIEWS, 1,908 CASES.

Numbers in the differentiated areas show the percentage of the individuals in a given interview decile who fell in the four groups based on achievement in the Reserve Training School. The first number in the single hatched areas represents the percentage for the Remaining Successful Group only. The second number in these areas represents the Total Successful Group (upper 15 per cent of entire group plus the Remaining Successful Group). The T-scores are based on the norms for male Reserve officer candidates. The deciles are based upon the subjects of the present study.

tionship is fairly comparable to that obtained between the combined interview-ability measures and achievement, but the relationship between the combined scores and achievement looks somewhat more satisfactory. It should be remembered, however, that the interview predictions could not have been made as well without the ability test scores.

The direct relationship between the final level of achievement of the officer candidates and their mean ability test scores is shown in Figure 3. While the relationship is clear-cut, it is not quite as satisfac-

tory as the relationships obtained when the predictions are based on the combined interview-ability scores, or upon the interview ratings alone.

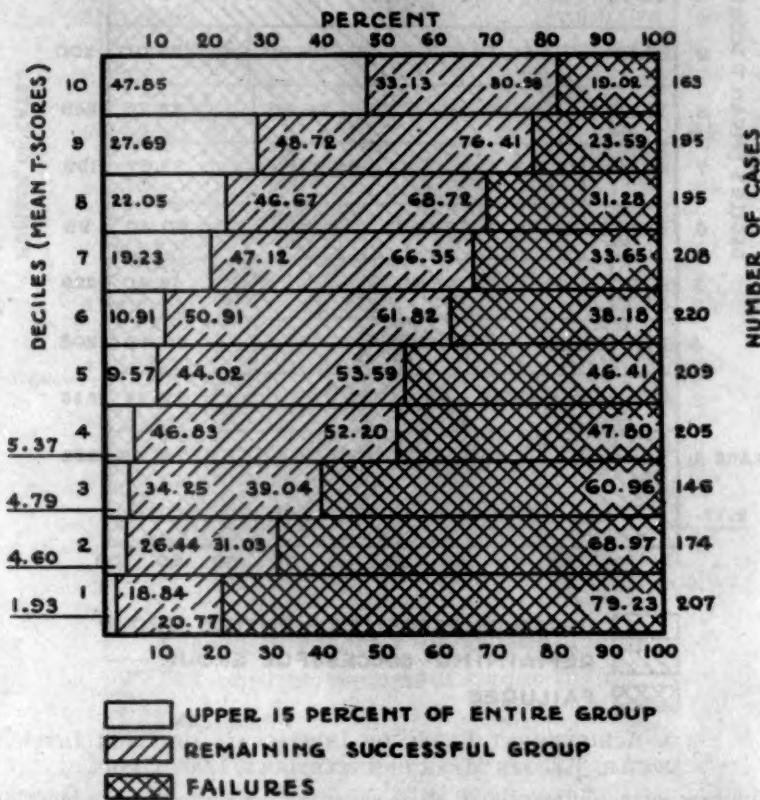


FIG. 3. FINAL ACHIEVEMENT LEVEL OF INDIVIDUALS OF EACH ABILITY DECILE, T-SCORE MEAN OF ABILITY TESTS, 1922 CASES.

Numbers in the differentiated areas show the percentage of the individuals in a given ability decile who fell in the four groups based on achievement in the Reserve Training School. The first number in the single hatched areas represents the percentage for the Remaining Successful Group only. The second number in these areas represents the Total Successful Group (upper 15 per cent of entire group plus the Remaining Successful Group). The T-scores are based on the norms for male Reserve officer candidates. The deciles are based upon the subjects of the present study.

Another method of showing the predictive efficiency of the psychological measures is to indicate how the achievement groups are distributed by these measures. Table I deals with the following achievement groups: (a) the upper 15% of the entire group; (b) all successful candidates; and (c) the failures. Beginning at the lower end of the interview-ability deciles, this table shows the percentage of each of these

groups which falls at and below each decile level. It may be noted that a considerably higher proportion of the failures than of the successful candidates fall in the lower interview-ability deciles.

TABLE I  
EFFICIENCY OF COMBINED INTERVIEW-ABILITY SCORES  
IN PREDICTING ACHIEVEMENT

<i>Decile</i>	<i>Cumulative Per Cent Top 15 Per Cent</i>	<i>Cumulative Per Cent Successful</i>	<i>Cumulative Per Cent Failures</i>
1	1.74	2.65	20.47
2 and below	2.78	8.61	36.09
3 and below	5.21	15.52	47.10
4 and below	8.68	23.37	59.76
5 and below	18.40	34.34	71.12
6 and below	25.69	46.26	79.53
7 and below	37.50	56.10	85.33
8 and below	48.96	67.93	91.12
9 and below	68.75	85.15	97.28
10 and below	100.00	100.00	100.00

Table II indicates the percentage of each of the three achievement groups which falls at and below a given interview decile. A higher proportion of failures than of successful candidates falls in the lower decile levels. The percentage of each of the achievement groups which falls at and below a given ability decile may be seen in Table III. Again, there is a proportionately higher number of failures in the lower deciles than there are successful men.

TABLE II  
EFFICIENCY OF INTERVIEW RATINGS IN  
PREDICTING ACHIEVEMENT

<i>Decile</i>	<i>Cumulative Per Cent Top 15 Per Cent</i>	<i>Cumulative Per Cent Successful</i>	<i>Cumulative Per Cent Failures</i>
2 and below	2.43	7.26	28.93
3 and below	9.72	15.55	46.28
4 and below	16.32	25.26	58.69
5 and below	25.35	36.48	70.84
6 and below	28.47	42.04	75.56
7 and below	40.62	54.48	83.47
8 and below	57.29	71.91	91.03
9 and below	73.61	86.05	96.93
10 and below	100.00	100.00	100.00

A comparison of Tables I, II, and III indicates that the combined interview-ability scores are somewhat more efficient in detecting failures

than either the average interview ratings or the average ability scores are separately. The interview ratings and the ability scores show fairly comparable results as far as the prediction of achievement is concerned.

TABLE III  
EFFICIENCY OF ABILITY TEST SCORES IN  
PREDICTING ACHIEVEMENT

<i>Docile</i>	<i>Cumulative Per Cent Top 15 Per Cent</i>	<i>Cumulative Per Cent Successful</i>	<i>Cumulative Per Cent Failures</i>
1	1.38	4.05	19.07
2 and below	4.15	9.13	33.02
3 and below	6.57	14.50	43.37
4 and below	10.38	24.58	54.77
5 and below	17.30	35.12	66.05
6 and below	25.61	47.93	75.81
7 and below	39.45	60.92	83.95
8 and below	54.33	73.54	91.05
9 and below	73.01	87.57	96.40
10 and below	100.00	100.00	100.00

*Discussion of Results.* It is clear that the ability tests and interview ratings utilized in the combined medical and psychological program furnish accurate and useful predictions of probable success and failure in the Reserve Training School. These results enlarge upon and in general substantiate data presented in a preliminary report (2). Certain inter-related factors made the results possible. Most of the officer candidates were highly motivated, the course was a relatively difficult one, and the time for study was a good deal more uniform than is the case in most colleges. This combination of factors meant that relative capabilities became very important. In addition, the grading and the adaptability rating of the men was carefully done by the personnel of the Reserve Training School, thus furnishing adequate criteria. Separate assessments were made of academic achievement and adaptability (officer-suitability). Thus, personality characteristics and emotional stability as well as academic abilities were of importance in determining the candidate's achievement. Adequate analyses were made of the ability and personality characteristics necessary for success in the Reserve Training School, and the methods used were successful in measuring these characteristics.

The fact that the combined interview-ability scores are somewhat better than either of the measures alone indicates that, in some cases, the interview ratings act as a corrective for the test scores. The interviewer can consider personality characteristics and emotional stability together with the test scores. He can rate down men with high abilities,

or can give higher ratings to men than do the test scores. It is also possible, of course, to give high ratings to high ability men and low ratings to low ability men when the interview findings warrant doing so.

It should be pointed out that the findings of the medical and psychological personnel were available only to the Superintendent, the officer in charge of Reserve Training and his assistant. Only those men who did poorly in academic work or adaptability were considered by the Reserve Training Administration as possibilities for failure.

#### V. SUMMARY

A combined medical and psychological program in which psychologists play an integral role has been developed at the United States Coast Guard Academy. The program deals with the evaluation of officers and officer candidates, and the furnishing of such services as counseling and psychotherapy to personnel stationed at the Academy. Duties of the psychologists include (a) test administration, (b) interviewing, (c) research and test construction, (d) counseling, psychotherapy, and individual testing, (e) fulfilling special assignments, and (f) discussing psychological topics.

It has been found that the interview ratings and ability test scores give accurate and useful predictions of probable success and failure of male Reserve officer candidates, in spite of the relatively high and homogeneous abilities of this group. When the interview ratings and ability test scores are combined, they furnish somewhat better predictions than either does separately. The results are interpreted.

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## PROCEEDINGS OF THE FIFTEENTH ANNUAL MEETING OF THE EASTERN PSYCHOLOGICAL ASSOCIATION

THEODORA M. ABEL, SECRETARY, LETCHWORTH VILLAGE

The fifteenth annual meeting of the Eastern Psychological Association was held at the College of Business Administration, Boston University, Boston, Mass., April 8, 1944, under the auspices of the Psychology Department of the University. Professor Wayland Vaughan acted as local chairman on arrangements. In December 1943, the membership voted by mail ballot to cancel the regular two-day annual meeting and the business meeting and to substitute instead a symposium pertaining to war problems. The membership also voted to grant the Board of Directors emergency powers for the duration of the war. Attendance at the symposium was 140; 80 members, 20 applicants for membership, and 40 guests. Income for the year amounted to \$673.50, total expenses were \$508.50, leaving a surplus of \$165.00.

The Program Committee planned two sessions for the one-day meeting, an afternoon session devoted to a symposium on rehabilitation after the war, and an evening session consisting of a panel discussion of the training of clinical psychologists. Various individuals known to be working on post-war problems were invited to prepare thirty-minute papers on their particular interests for the symposium and to contribute their point of view toward the topic of the panel discussion. It was planned to have six contributors to the symposium on *Demobilization and After*, but only four papers were presented during the afternoon. The paper by Stanley G. Estes of Northeastern University, on *The Training of Personnel Psychologists* was transferred to the evening session since it fell rightly in the topic of the panel discussion. As time was getting short, Donald G. Marquis of Yale University, very considerately withdrew his paper on *Rehabilitation and Counseling for the Returning Soldier*, so as to allow time for the presidential address.

Edna Heidbreder, of Wellesley College, delivered the presidential address at the termination of the symposium. Her topic was *Toward a Dynamic Psychology of Cognition*. She presented a very clear hypothesis for a functional approach to the cognitive processes, an approach which marked no Aristotelian cleavage between perception and thinking but rather explained the emergence of cognitive reactions from the more basic perception of objects. Experimental data were given which added considerable weight to the point of view outlined. Essential as are our more immediate war and post-war problems and expediencies, this presidential address was indeed a real contribution to the field of scientific psychology and logical thought.

*Elections and appointments:* Officers were elected to serve as follows:

*President*, Henry E. Garrett, Columbia University, 1944-45; *Treasurer*, Lyle H. Lanier, Vassar College, 1944-47; *Directors*, Edna Heidbreder, Wellesley College, and Anne Anastasi, Queens College, 1944-47, and *Director*, 1944-46, to fill the unexpired term of Henry E. Garrett, Carroll C. Pratt, Rutgers University. The Board of Directors appointed, as chairman of the Program Committee for 1944-45, J. McV. Hunt, Brown University; and as Representative on the Council of the American Association for the Advancement of Science, Elaine F. Kinder, Rockland State Hospital, 1944-46; and on the Auditing Committee, Gardner Murphy and Louis Long, College of the City of New York, 1944.

The following actions were taken at the meeting of the Board of Directors acting for the membership:

1. Proceedings of the 1943 meeting as printed in the *Psychological Bulletin* were accepted.
2. The reports of the Secretary and of the Treasurer were accepted and a budget totalling \$675.00 was adopted for the year 1944-45.
3. Seventy-six applicants for membership were taken into the Association.
4. The report of the chairman of the Clearing House on Information relative to job placement showing that among 50 requests for psychologists made during the year, 12 were definitely filled by members of the Association, was accepted.
5. The Board voted to continue for one more year the Clearing House on Information as now constituted, with the secretary of the Association as chairman and with an advisory committee including the Executive Secretary of the Office of Psychological Personnel and three members representing various geographical localities.
6. It was voted to send a letter to Dr. Ernest R. Hilgard, chairman, and the other members of the Joint Constitutional Committee of the Intersociety Conference of the American Psychological Association and the American Association for Applied Psychologists, recommending that the new national psychological association be set up in such a way as to insure representation by regional societies on the Council of the new organization.
7. Since traveling was so restricted this year making it impossible for a large portion of the membership to attend the Boston meeting, it was voted to print abstracts of the papers contributed to the meeting.
8. It was voted to send an offprint of the Proceedings to all members of the Association who are not members or associates of the American Psychological Association and hence do not receive the *Psychological Bulletin* in which the Proceedings are printed.
9. The invitation of Professor Gardner Murphy for the Association to hold its annual meeting in 1945, at the College of the City of New York was accepted with thanks.
10. A vote of thanks was extended to President Marsh, Professor Vaughan and other members of the local committee on arrangements at Boston University for their kind hospitality in arranging for the meeting of the Association this year.

The financial statement for the fiscal year, 1943-44, prepared by the Treasurer and verified by the Auditing Committee, is as follows:

FINANCIAL STATEMENT AS OF MAY 1, 1944  
FOR THE FISCAL YEAR 1943-1944

*Income*

Membership Dues	
Dues for the current year (1943-44).....	\$ 425.00
Arrears for 1942-43.....	86.00
Arrears for 1941-42.....	29.00
Applicants' fees.....	72.00
Guest fees.....	36.00
Interest on Savings Account.....	25.50
Total Income.....	\$ 673.50

*Expenditures*

Publication of 1942-43 <i>Proceedings</i> .....	\$ 42.55
Office of the Secretary.....	215.75
Office of the Treasurer.....	84.40
Travelling expenses of officers.....	4.60
Printing and mimeographing.....	26.47
Miscellaneous supplies.....	11.92
Postage.....	85.91
Refund of dues payments.....	2.00
Balance on expenses of 1943 meeting.....	10.00
Letters for Goodwin Watson.....	20.20
Collection of money orders (bank).....	.70
Registration at Boston meeting.....	4.00
Total Expenses.....	508.50
Surplus for 1943-1944.....	\$ 165.00

*Balance Sheet*

Cash: Fifth Avenue Bank of N. Y.....	\$ 849.84
New York Savings Bank.....	1291.75
Petty cash (Secretary).....	20.00
Petty cash (Treasurer).....	20.00
Total Cash.....	\$2181.59
Capital: As of May 1, 1943.....	2016.59
Surplus, 1943-1944.....	165.00
Total Capital.....	\$2181.59

The Program of the meeting was as follows:

*Psychology and the Peace.* GARDNER MURPHY, College of the City of New York.

Psychologists failed twenty-five years ago to study the world predicament in psychological terms, and during the 'twenties and 'thirties they failed to study the processes which eventuated again in war. We hope now to do better, contributing a little something to knowledge which may serve to forestall World War III.

First, we are giving attention to problems of inter-cultural understanding, with special reference to the sore spots which develop as a result of differing social frames of reference, misunderstandings of the value systems of others, and unwitting ego injuries. It has become patent in recent months, for example, that anti-British and anti-Russian feeling are related largely to the American ego rather to American economic interests as such. By understanding and clarifying, we may help to mitigate these tensions.

Secondly, we can study psychologically the process of education for world citizenship, as it relates not only to the content of school and college work, but to the experience of the democratic process. International educational planning, providing democratic experiences and a basis for inter-cultural sharing (as exemplified by contemporary leadership research in the Boy Scouts) might do a great deal.

Third, advance in public opinion techniques has made it possible in recent years for executives and diplomats to understand far more clearly than before in what direction the public wants to go. Today, despite the efforts of the isolationist press, it is clear that the great majority of Americans ardently desire international collaboration in the resolute prevention of war. The more closely public opinion is studied, and the more fully the desire for peace is implemented, the safer we shall be; and as the public opinion techniques improve and become more sophisticated and more revealing, they will discover better directives for executives. We are on the threshold of discovering research techniques to study the *world tides of public opinion*, and to integrate the knowledge with democratic policy.

*Readjustment of the Returning Serviceman.* IRVIN L. CHILD, Yale University.

This paper reports a few of the general points made most frequently or urgently by contributors to a projected publication of the Sub-Committee on a Textbook on Military Psychology.

Typical among factors posing problems of readjustment for large numbers of discharged servicemen are the following:

1. The absence of teachers to guide the relearning required.
2. Loss of prestige, responsibility and income suffered on separation, particularly in the case of officers.
3. The inappropriate carry-over into civilian life of habits and attitudes acquired or strengthened in the service, such as emotional dependency, avoidance of initiative, certain specific skills of leadership.
4. Unrealistic attitudes and beliefs about civilian life, such as exaggerated notions of civilian prosperity, over-idealization of satisfactions of normal life in contrast with military hardships, and false expectations based on restricted experience with civilian society during furloughs.
5. Feelings of alienation from and hostility towards civilians, including even close relatives.

Among respects in which the attitudes and knowledge of the general public will be especially important as determiners of good or bad adjustment are the following:

1. Civilians' being set to expect changes in servicemen and therefore to readjust their own behavior.
2. Preparation for resentment in some veterans, and hence for an attitude leading toward conciliation rather than further split.

3. Appreciation of the need of disabled men for reestablishing independence through new skills, rather than for over-assistance which would encourage dependence.
4. Understanding of the meaning of psychiatric bases of discharge, in order to prevent unfair prejudice against men so discharged.

*Some Types of Military Psychiatric Casualties and the Problem of Rehabilitation.*  
DAVID SHAKOW, Worcester State Hospital.

The results of a study of 49 mentally disordered soldiers taken from a larger group of 175 who broke down before combat are reported. When the schizophrenics are divided into four classes and comparison made with groups of psychoneurotics and psychopathic personalities it appears that two of the schizophrenic groups and the psychopathic personalities show many similarities and the other two schizophrenic groups and the psychoneurotics are similar within themselves. From the point of view of background characteristics, the first three groups give evidence of poorer adjustment in most spheres, i.e., there is a greater frequency of family neuropsychiatric abnormality, disturbed home conditions and unsocialized personality development. In the military situation, whereas the conditions which seem to play a prominent role in causing breakdown in the psychoneurotic and the two less disturbed schizophrenic groups are either socially oriented or the result of concrete difficulties, in the other three groups these factors seem to be mainly the result of inadequacies of a deep personal nature. With respect to rehabilitation, of 21 cases available for study in this respect 10 had a good outcome (doing as well as before induction, or better) and 11 had poor outcome (either still in the hospital or doing poorly outside). The characteristics which distinguish the groups are in many respects similar to those already mentioned. Good outcome is associated with good previous social adjustment, good previous employment adjustment, cohesive home, evidences of maturity of personality, and in the military situation, nostalgia and worry over relatives. The factors associated with poor prognosis are: poor previous social and employment adjustment, disorganized or demanding home, erratic and hostile personality traits, the use of the army as an escape, a dislike of regimentation and authority and sex difficulty in the army. Psychological studies during hospitalization also revealed similar trends. Because of the relatively minor importance of the vocational factor and the major importance of personality guidance and therapy in these cases, the psychologist's function appears mainly to be the development of techniques for obtaining more objective and accurate anamnestic data and the development and application of personality evaluation devices.

*Vocational Guidance Problems of Returning Veterans.* CLYDE W. GLEASON, U.S. Veterans' Bureau.

Recent experience with disabled veterans of World War II shows urgent need for more realistic vocational guidance. The best way to reorient our thinking in this vital counseling area is to consider certain outstanding problems being faced by the veteran and those who are trying to help him effect his vocational adjustment.

Where can he find a good counselor? This is not merely his problem, but that of a society which must not wait until the trickle of veterans grows to a torrent. What will be the post-war job opportunities? Are there training opportunities for the more promising vocations? If he is able, is it better for the veteran to get into remunerative war industry now, contribute to the war effort and save money for future investment in training or business, or to select a long-

time objective and start preparing now? Should he give principal weight to his long-time vocational problem as such, or greater weight to family responsibilities (present or potential), climatic factors, etc., which might alter or limit his vocational objectives? Should he migrate or limit himself to vocations in the home community? What are the implications of his disabilities? What are his deepest vocational interests and his highest aptitudes? If psychology can groom her professionals to the point of attacking such problems realistically, and bring sound psychological principle and method to bear upon them, she will have met one of the greatest challenges in her history.

#### PRESIDENTIAL ADDRESS

*Toward a Dynamic Psychology of Cognition.* EDNA HEIDBREDER, Wellesley College.

#### PANEL DISCUSSION

*The Training of Clinical Psychologists as Part of Post-War Planning.* Chairman: SAUL ROSENZWEIG, Western State Psychiatric Hospital. Participants: GORDON W. ALLPORT, Harvard University, STANLEY G. ESTES, Northeastern University; GARDNER MURPHY, College of the City of New York; DAVID SHAKOW, Worcester State Hospital.

PROCEEDINGS OF THE TWENTY-FOURTH ANNUAL  
MEETINGS OF THE WESTERN PSY-  
CHOLOGICAL ASSOCIATION

RALPH H. GUNDLACH,\* UNIVERSITY OF WASHINGTON

The Association again this year followed the policy of dispensing with a coast-wide meeting because of the difficulties of travel and accommodation, and encouraged local meetings in the three areas of the Pacific Coast.

In the Northwest, for the second year, no meeting was attempted. The Bay Area had a regional meeting on Saturday, June 17th, at Mills College, Oakland. Dr. Lovisa Wagoner was the local chairman. Approximately 80 persons attended the sessions. Psychologists of the Los Angeles area met on Saturday, July 15th, at the University of California at Los Angeles, with Dr. H. C. Gilhousen as local chairman. About 150 persons attended these sessions.

The officers of the Association still remain: *President*, Jean Walker Macfarlane, Institute of Child Welfare, University of California; *Vice President*, William Griffith, Reed College; *Secretary-Treasurer*, for a three year term, Lester F. Beck, University of Oregon, at present on leave.

PROGRAM OF THE BAY AREA MEETING

Saturday Morning June 17,

WARNER BROWN, Chairman

*The Relative Effectiveness for Immediate Recognition of Sound-Movie Instructional Film Contrasted to a Lecture.* RALPH H. GUNDLACH, University of Washington.

The study, made at the request of the First Motion Picture Unit of the Army attempted to measure some of the learning accompanying the presentation of instructional films on airplane flight, and landing; and to measure by the same means, the learning accompanying brief lectures covering the same materials. Under these conditions neither group was statistically superior to the other.

*A New Stabilometer for Studying Dynamic Equilibrium in the Standing Position.* ROLAND C. TRAVIS, Stanford University.

*Purpose:* To study a person's ability to maintain balance while standing on an unstable base.

*Technique:* Unstable platform mounted on an universal joint with extension springs to control difficulty of the task. Hinged stylus, contact target, interrupter and electric counter for recording accuracy of performance. Trials one minute long with rest periods of one minute.

*Results:* (a) Great individual differences manifested; (b) Fairly high negative "r" between weight and balance score and between height and balance

\* Acting secretary-treasurer, in the absence of L. F. BECK.

score; (c) Partial "r's" favor weight as important factor; (d) Great variability between individuals in same weight and height groups; (e) Small sex difference in favor of the women; (f) Correlation of .85 between successive trials; (g) Fair "r" between age and balance score, also between weight and age. Partial "r" again favors weight as the important factor.

*The Psychopathic Delinquent: An Interpretation of Some Current Opinions and Indications for Treatment and Segregation.* ROBERT B. VAN VORST, Preston School of Industry.

This paper presents a summary and synthesis of some current interpretations regarding the psychopathic delinquent. Consideration is given to the differentiation between the defective and psychopathic delinquent, also between the psychopathic delinquent and the ordinary delinquent, and other abnormal personalities. Illustrative cases show the value of diagnosis as early as possible, as well as the necessity for specialized treatment involving lengthy custodial segregation.

*Some Recent Developments in the Aims and Techniques of Opinion Sampling.* RALPH GRANNEBERG, OWI.

No abstract available.

*Prestige in Music.* PAUL R. FARNSWORTH, Stanford University.

The traditional approaches to the study of prestige in music have been through balloting and through the analysis of encyclopedia space devoted to the persons in question. These two methods (analyses of the ballots of school children, of college students and of musicologists; tabulations of space in lay and in musical encyclopedias) have been compared and studied in some detail. Other procedures have been devised which include the tabulations of page mentions and of phonographic recordings.

By the employment of these several methods prestige-changes over the twentieth century have been analyzed. The relations to "time since birth," preference and acquaintance have also been studied.

*Spatial Learning and Goal Location.* BENBOW F. RITCHIE, University of California.

The first experiment investigated generalization effects in rats which result from 4 days training on one path to food. On the critical trial this path was blocked. The rats were offered 18 new paths radiating in both directions at 10 degree intervals. Of the total group ( $N = 56$ ) 36 per cent took the shortest Euclidean path to the original goal location. The others took the remaining paths randomly. The interpretation was that spatial learning involves development of a general readiness to orient towards the physical or Euclidean location of the goal.

The second experiment tested the hypothesis that to learn a two-goal-location problem is more difficult to learn than a single location problem. A maze, shaped like a plus sign, was used, with food boxes at each end of the north-south path. The experimental group was fed in the north box, when started from the east, in the south when from the west. The control group, started from both east and west, was fed in the north on all trials. Only 3 ( $N = 8$ ) of the experimentals learned the problem in less than 24 trials; all the controls learned it in less than 8.

Saturday Afternoon, June 17  
SYMPOSIUM ON REHABILITATION  
JEAN WALKER MACFARLANE, Chairman

*In-Service Programs*

CAPT. ARTHUR C. JONES, Letterman General Hospital. The problems and program of reconditioning at a receiving hospital.

MAJOR LIPSCHLITZ, Camp Stoneman. Psychiatric problems in a rehabilitation camp.

*Problems and Programs as seen by Liason Civilian Organizations.*

HELEN PRATHER, Military and Naval Welfare Service, American Red Cross. The major worries and preoccupations of the hospitalized service men, as seen by the psychiatric social worker.

ALICE JOHNSTON, Home Service Division, American Red Cross. The major problems of the service man in relation to his family.

C. V. CARLSON, Acting Vocational Rehabilitation Officer, Veterans' Authority. Problems of rehabilitation as seen by the Veterans' Administration and the program for meeting them.

BARBARA MAYER, United States Employment Service. The problems seen in the process of job placement of mustered out service men.

*Discussion led by:*

LT. ERIK WRIGHT, Oak Knoll Hospital

LT. WILLIAM MURPHY, Morale Officer, Letterman Hospital

ROGER BARKER, Stanford University

ALAN NELSON, California Bureau of Vocational Rehabilitation

CALVIN P. STONE, Stanford University

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PROGRAM OF THE LOS ANGELES MEETING

Saturday Morning, July 15

ROY DORCUS, Chairman

*The Explanation of Physical Phenomena Given by White and Negro School Children.* F. NEWELL JONES, University of Alabama.

Explanations of ten simple physical demonstrations were obtained from 163 Negro and 134 White children, aged 8 to 16 years, in the public schools of a Southern community. These answers were scored for adequacy, and classified according to type of answer, e.g., materialistic, superstitious. Few non-materialistic answers were found, and these were not more numerous among the Negroes. Negroes scored lower in adequacy in many cases, but only a small proportion of these differences were reliable. The data were also analyzed for

age trends and sex differences. Various factors contributing to the results obtained, such as educational opportunity, are briefly considered.

*V.T.E. in Relation to Discriminanda.* EVELYN GENTRY CALDWELL, University of California at Los Angeles.

No abstract available.

*A Study of Selected Cases of Aphasia.* ELLEN B. SULLIVAN, University of California at Los Angeles.

Cases studied presented serious aphasic symptoms resulting from accident or illness. They presented also a known history of satisfactory accomplishment previous to the onset of the difficulty. The objective was to determine the nature and extent of the difficulty and to check the efficacy of specific techniques to improve the aphasic condition. Seven cases were worked with intensively and followed up through the past nine years. Four of these satisfied the objective of this study. Three cases were of a more complicated type but gave information of interest. The four selected cases improved in control of aphasic symptoms and in personal, educational, social and vocational adjustment. The study included a reevaluation of tests and learning materials for aphasic subjects.

*The Status of the Image in "Objective" Psychology.* FRANK DAVIS, University of California at Los Angeles.

No abstract available.

*Some Aspects of Discrimination in a War Area.* DOROTHY W. BARUCH.

As labor shortages developed in Southern California, the immigration of Negroes from the South increased enormously. The Negro had looked forward to a land of promise. He found housing unavailable, jobs disappointing, community facilities sparse, discrimination rife. A frequent reaction was one of aggression. His attack called forth counter attack. This spread to embrace other minority peoples.

Racism mounted, nullifying seniority privileges, permitting more open aggression, including renewed activities of the Ku Klux Klan. In spite of manpower shortages, orders still came from industries specifying that no Jews, Negroes or Mexicans would be hired. Teachers in the schools let prejudice create scapegoating in which they themselves took part. Hostility was freely sanctioned. Counter-hostility begot counter-hostility in an unending chain.

Various types of treatment were attempted. Their limitations, and further treatment which might be profitably undertaken, are discussed.

*Alleged Binocular Color Mixing.* KNIGHT DUNLAP, University of California at Los Angeles.

Five conditions of retinal stimulation were employed: (1) Stimulation of both eyes by red light, (2) Stimulation of both eyes by green light, (3) Stimulation of one eye by red and the other by green, (4) Stimulation of one eye by red and the other by blue and (5) Stimulation by blue alone. Wratten color filters were used; F29 for red, B48 for green, and C-5 .47 for blue.

The results show no evidence for binocular mixture, and the apparent mixture of red and green binocularly can be explained by the well known facts of color adaptation, and the fading in saturation of all colors as the intensity of stimulation is increased.

*Unorthodox Uses of Personality Tests.* HARRY C. STEINMETZ, San Diego State College.

Personality tests may be readily used in the measurement of understanding, compatibility, opinion or attitude, and what may be called either psychological perception or empathetic insight. Such usages were described and illustrated in the foregoing order of emphasis, abilities being indicated by securing, on request, high or low scores in tests of high validity, by emulating modal responses of a group, predicting attitude responses, and responding as another does. Appeal was made for aid in securing data. It was hypothesized that psychological ability may be measured, as for selecting and training clinical psychologists, psychiatric social workers, interviewers and raters, and that some of the concepts of psychophysics are relevant.

*A Brief Study of the Humm-Wadsworth Temperament Scale and the Guilford-Martin Personality Inventory in an Industrial Situation.* ROY M. DORCUS, University of California at Los Angeles.

Two groups of employees selected by management were subjected to these tests. One group contained individuals who were definitely maladjusted or problem cases; the other group contained only individuals who were definitely well adjusted and satisfactory. Production was not taken into consideration. Both groups were given the tests at the same time and the composition of the group was not known in advance. The results indicate that the tests agreed with the ratings of management in approximately 70% of both the desirable and undesirable cases.

*The Validity of the Humm-Wadsworth Temperament Scale.* DONCASTER G. HUMM.

Two hundred individuals were diagnosed for temperament, each one by two technicians separately, and, in each instance, the diagnoses compared. One hundred and eighty-one of these were to be found in agreement. These subjects were then given the Humm-Wadsworth Temperament Scale. The verified technicians' diagnoses were then compared with the Humm-Wadsworth diagnoses. The product-moments correlations obtained were as follows:

All cases (Number of comparisons = 1,267).....	+ .85 ± .005
Cases with acceptable No-counts (Number of comparisons = 728).....	+ .94 ± .003

In all cases the total agreement with diagnosis was 87.5 per cent, and the total disagreement, 12.5 per cent. In the cases of acceptable No-count, the total agreement was 91.0 per cent, and the total disagreement was 9.0 per cent.

*Counseling Technical Employees.* HARRY W. CASE, Douglas Aircraft Co.

Tentative indications concerning the basic types of problems confronting male technical employees have been obtained by a study within the Engineering Division of a large corporation. Statistics concerning the counseling problems were compiled over a three month period and these were capable of classification into categories concerned with: (1) Inter and intra departmental and plant transfers, (2) Simple personal problems, (3) Wages, (4) Courses of study, (5) Employment for other members of family, (6) Wage stabilization program, (7) Selective Service, (8) Associates, (9) Job placement, (10) Job classifications, (11) Availability Certificates, and (12) Psychoneurotic in nature. These appeared capable of segregation into three large groups: Those associated with

industrial life; those associated with the individual's non-industrial environment; and those attributable to wartime influences. A tentative and later investigation indicates that the wartime factors may significantly influence and vary the type and number of problems.

Saturday Afternoon, July 15.

COL. J. P. GUILFORD, Chairman.

*Reading Disability in the Army.* GRACE FERNALD AND PERINA PIZIALI, University of California at Los Angeles.

No abstract available.

*Psychological Services in the Army Air Forces.* J. P. GUILFORD, LT. COLONEL' Air Corps.

The chief value of psychologists to the Army Air Forces has been their ability to evaluate men at all stages of the training and combat sequence, from induction to separation from military service. Adapting known evaluative procedures and creating new ones have entailed a research program on an enormous scale carried on simultaneously with processing activities.

Psychological procedures for selection and classification of Air Corps personnel and for promoting optimal learning and performance have proven to be extremely valuable. One significant conclusion is that evaluative procedures are best when especially designed for the purpose. This requires continual technical attention to changing requirements of personnel and of their assignments. Development of selective tests and research on training criteria are inseparable if the best results are to be obtained.

*The Functions of a Psychological Research Unit in the Army Air Forces.* NEIL D. WARREN, Major, Air Corps.

The functions of psychological Research Units of the Army Air Forces have been both experimental and applied. The applied aspects have involved the measurement of aptitudes for aircrew training as pilots, navigators, and bombardiers. The administration of a battery of written and psychomotor tests, weighted appropriately for each type of training, provides information upon which classification is based.

The experimental program includes the development of new tests, investigation of training criteria, studies of training methods, and studies of performance after training. Illustrations of these various problems are drawn from the operation of Psychological Research Unit #3.

*A New Item-Analysis Chart.* FREDERICK B. DAVIS, Capt., Air Corps.

An item-analysis chart has been developed that provides a rapid means of obtaining both a discrimination index and a difficulty index for most usable test items. These indices have the unique merit of constituting essentially linear scales. The discrimination indices, which are a function of Fisher's  $z$  values, range from -100 to +100. The difficulty indices, which are directly comparable regardless of the number of choices in the items, run from 1 to 99. Proper adjustments are made to insure the most reasonable treatment of items omitted by subjects as distinguished from items not reached by subjects. There is no necessary relationship between these difficulty indices and the discrimination indices of the corresponding items. Independent information regarding the discriminating power and the difficulty of each item is required to attain maximum efficiency in measurement.

*Factor Analysis Findings in the AAF Psychological Program.* LLOYD G. HUMPHREYS, Captain, Air Corps.

Several well-known factors have been isolated and utilized in the AAF Psychological Program. These are the Verbal, Numerical, Perceptual, and Inductive Reasoning factors defined by familiar tests.

Three factors have been isolated in the area of spatial thinking. One of these has been termed Visualization, defined by Thurstone's *Punched Holes* and *Surface Development* Tests and a Bennett-type mechanical test. The other two cannot be well differentiated from each other verbally at present. One is best defined by the *Hands Test*; the other by a certain paper and pencil, and psychomotor tests developed in the program. The *Flags Test* and the *Cubes Test* appear on both factors.

Other factors are a Motor Coordination factor and a Mechanical Information factor.

Present evidence indicates that the validity of a test can be adequately expressed as a summation of the validities of its factorial components.

#### PANEL DISCUSSION

##### *The Psychological Aspects of Motion Pictures Which are Related to the War Effort*

FRANKLIN FEARING, Chairman

###### 1. *Methods of evaluation of motion pictures.*

FLOYD RUCH, University of Southern California.

MAJOR J. J. GIBSON, Army Air Corps.

###### 2. *Tensional areas in which motion pictures can make a contribution.*

MAX SILVERSTEIN, Council of Social Agencies, Los Angeles.

MAJOR BERNARD VORHAUS, First Motion Picture Unit, Army Air Corps.

###### 3. *The motion picture branch of the OWI overseas, and psychological warfare.*

SIDNEY HARMON, OWI, Los Angeles.

## BOOK REVIEWS

YERKES, R. M. *Chimpanzees. A laboratory colony.* New Haven: Yale Univ. Press, 1943. Pp. xv+321.

"This is a composite portrait of chimpanzee personality done in terms of behavior" (vii). It is also a history of the Yale Laboratories of Primate Biology at Orange Park, Florida (now the Yerkes Laboratories of Primate Biology). The book brings together and consolidates the important experimental, medical and naturalistic observations on the chimpanzee both from the Yale laboratories as well as from other sources (notably Köhler and Kohts). It is intended for the lay reader as well as for the scientists.

The book is divided into three approximately equal parts which are introduced by a prologue and followed by an epilogue. Part I, containing five chapters, is entitled, *General Description*. Part II, also containing five chapters, is entitled, *Mentality*. And Part III, which has four chapters, is headed, *Care and Feeding*. There are 24 figures and 64 plates which cover a remarkable range of chimpanzee behavior and treatment from parturition to major surgery. A list of 167 selected references and an excellent index complete the volume.

The observations upon which the book is based cover three generations of chimpanzees totalling a "hundred or more" (234) individuals. Many of the subjects were born in captivity and were observed by the author or by members of his staff from the time of birth onward. Seventeen spent all or part of their infancy in the special nursery of the laboratories. From this unequalled experience Professor Yerkes is led to remark, "For the study of forms of behavior similar to, or perhaps identical with, what we know in ourselves as ideational and symbolic processes, imitation, instrumentation, and language, there probably is no existing creature which has so many advantages as the chimpanzee." (5). Or again, "Its strength and intelligence are such that the adult of the species might conceivably be trained to perform some manual labor necessary to human existence, and it might possibly come also to operate human tools and simple machines" (259).

The major contributions which have grown out of his years of unwavering interest in primate research are listed as:

1. the development of the experimental colony to make specimens available for research,
2. the solution of the practical problems of feeding, housing, and health,
3. the accumulation of much general information about chimpanzee structure and behavior,
4. the development of valuable laboratory and colony records, and
5. the publication of more than 200 journal articles, monographs, and books covering the investigation of special topics.

The fields which have been studied include the physical characteristics, growth, the sexual and reproductive cycles, the sensory and perceptual processes, neural correlates of behavior, learning and adaptation, memory and imagination, the use of tools, symbolism, insight and linguistic expression, suggestibility, emotional behavior, social behavior, drug addiction, parasitic control and related problems of health. Nearly all of these are discussed at some length in the present volume. Many are elaborated in detail by illustrations and quotations from the original publications.

The author's position on the question of instinct is of special interest. He does not believe that the concept can be simply swept aside, as for example, by substituting the word "drive" for "instinct." Both man and ape have much instinctive behavior, although the ant may be taken to typify instinct and the ape correspondingly to typify intelligence. We tend on the whole both to underestimate human instinct and to underestimate chimpanzee intelligence.

Learning is divided into five categories or levels, the lowest of which is "modification of motor expression in correspondence with maturation and exercise" (131). Examples in the ape are the coordination of simple acts into behavior patterns, as in grasping, climbing or walking. The other levels of learning are conditioning, trial-and-error learning, directed learning involving imitation and tuition, and ideational learning.

Concerning emotion in the chimpanzee, Professor Yerkes writes as follows: "The young chimpanzee is a lively extravert, active, energetic, impulsive, enthusiastic, sanguine, very sociable, ordinarily good-natured and fairly good-tempered, somewhat mercurial, timid before the unfamiliar, extremely expressive of its continuous flow of feelings and rapidly changing moods" (27). Yet, "an individual which in the first few years of life impresses one as gay, joyous, full of life, friendly, eager for companionship, in the second or third decade may appear independent, aloof, self-centered, serious, and perhaps also short-tempered or irascible" (28).

Much valuable information on the care and treatment of chimpanzees in captivity is given in the third part of the book. We learn that the chimpanzee is an ideal surgical subject and will not pick or irritate a wound in the process of healing, providing it is left unbandaged. The chimpanzee in captivity is more susceptible to respiratory diseases than to any other kind, the death records of the colony showing that ten specimens have succumbed to pneumonia alone, whereas no other single cause has claimed more than two individuals. The volume publishes for the first time the results of strength tests on the chimpanzee (Finch) which lead to the surprising conclusion that the ape is only slightly superior to man in this respect, and not markedly superior as was previously supposed (112).

The approach of the author to his subject is comparative throughout. Parallels to human behavior and to that of the monkey or to lower infra-humans are frequently drawn. The writing is done in a friendly tone and is much enriched by personal reminiscences of chimpanzee behavior which could only have been supplied by Professor Yerkes. Not infrequently there is inserted a bit of worldly philosophy.

The book as a whole is frankly anthropomorphic, although the author with commendable caution states that, "all our definitions must be operational and our descriptions strictly behavioral" (154). One wonders, at times, if he is not indulging in a whimsical dig at the human race when he characterizes the behavior of the female chimpanzee toward the male in terms of "wiles, trickery, or deceitful cunning" (83), or again when he writes that "the female is, chameleon-like, a creature of multiple personality" (85). A prejudice in favor of the chimpanzee as an experimental subject to the exclusion of other organisms both higher and lower seems to permeate the book. To those who know the author, these things will be interpreted simply as expressions of his individuality and enthusiasm.

That this book is a major contribution to the literature of psychology and biology, there can be no question. It represents the culmination of more than 40 years of scientific interest in the anthropoid apes—an interest which began

somewhere around 1900 when Professor Yerkes was a graduate student at Harvard, and which has made him today the undisputed world authority upon the behavior of the chimpanzee.

W. N. KELLOGG.

Indiana University.

ACKERSON, LUTON. *Children's behavior problems: Vol. II. Relative importance and relations among traits.* Chicago: University of Chicago Press, 1942. Pp. xx+570.

Volume I of Children's Behavior Problems, titled "Incidence, Genetic, and Intellectual Factors" (1931), examined the frequency of 161 symptoms and problems among 5,000 children examined consecutively at the Illinois Institute for Juvenile Research. The present volume analyzes the association between each of the several traits and each of three composite measures: personality total (sum of all personality problems present in the case history), conduct total (sum of all conduct problems), and number of arrests for misconduct. A large number of interrelationships among traits are also explored.

The author recognizes two possible research approaches: the investigation which proceeds to test an hypothesis (the *ad-hoc* approach), and the study which amasses data to discover what relationships emerge (the exploratory procedure). His procedure is the latter and is based on the argument that, in an area where little research has been done, such a method will be the more profitable. With this assumption statisticians of the Fisherian school will probably disagree, although they might accept the ingenious logic likening the tetrachoric correlation procedure to the control group method of research.

Product-moment, tetrachoric, and biserial correlations are the principal statistical devices used and deserve some comment. The author's statement of purpose includes the usual cautions on causal interpretations of correlation and makes clear that only the amount, not the direction, of causation may be known from correlation analysis. With more candor than is frequently found among psychological researchers, the author explicitly states the conditions under which use of product-moment, biserial, or tetrachoric correlation is valid and points out that certain of these conditions are not satisfied by his data. He justifies the analysis, however, on the grounds "that in our categorical data the departure from strict normality was seldom so great as to invalidate entirely the meaning of our tetrachoric and biserial correlations within the latitude of interpretation of this study" (19). He avoids other measures of association not based on assumption of normality and rectilinearity of regression as lacking "standarized meaning." The author states that he favors the correlation coefficient over such measures of significance of association as the critical ratio and, presumably, chi square because the latter depend upon the size of the sample; he does not recognize that the correlation coefficient likewise may be considered a measure of significance subject to the size of the sample.

Although Dr. Ackerson notes that correlation coefficients are not the final goal of a research procedure, his treatment will probably not satisfy statisticians who distinguish sharply between problems of testing significance and problems of estimation. The discussion includes an adequate consideration of the proper interpretation of the correlation coefficient in terms of alienation, but adds that "correlations greater than .50 are considered 'high' on the basis of their rarity" and that "among negative correlations, those larger than -.20 occurred so infrequently that they may be considered important" (66). Thus, a sound statistical interpretation of correlation between traits is blurred by an interpretation

based on frequency of occurrence in a particular study. Such an interpretation has its place, but may be misleading to the many clinical workers who are invited to use the findings of this research (with proper caution) as the basis for diagnoses and predictions in their work with children. The author, further, states his intention to present the tables of intercorrelations with a minimum of comment to be interpreted by each reader from his own background and for his own purposes. It is to be hoped that the psychologists or social workers who make such interpretations in order to improve their clinical practice will be sufficiently experienced with correlation analysis as not to over-interpret degrees of association.

The mass of correlation coefficients (over 1,400 of them), which comprise the majority of tables in the text, will interest the theoretical student of behavior as well as the applied worker. To illustrate the many findings of value to the discerning student of social behavior, a few may be cited. The circumstances of discord between parents and vicious (as distinguished from "immoral") home conditions do not correlate significantly, either with personality total or with conduct total. The circumstance of "immoral home conditions" shows some correlation with police arrest, but not with the personality or conduct criteria. Designation of "psychopathic personality" is more closely associated with the conduct than with the personality criterion. Among girls, the conduct score is more related to the personality score and less to police arrest than is true of boys. Throughout the text the author refrains from extensive interpretation of his data but shows considerable ingenuity in spotting internal evidence for validity of the findings.

Chapters 13 through 60 may be read selectively and in any order. These give the results of correlating selected traits with other items in the total list. Although the author's persistence and ingenuity in tracing out associations have undoubtedly revealed the most important and meaningful relationships, factorial or "pattern" analyses of the interrelationships should be very interesting. However, a complete analysis must wait for improved techniques of matrix multiplication, to reduce the impossible amount of labor involved.

The author is to be highly commended for his clarity of exposition, for his directness in facing issues, and for his honesty in revealing the shortcomings of his material. While the study admittedly reveals nothing concerning the time factor in the development of behavior or the direction of causation in the observed relationships, it succeeds most admirably in providing material for many hypotheses concerning human behavior. In psychology there are few single studies equal to this in the number of direct leads to research which it provides.

DALE B. HARRIS.

*University of Minnesota.*

GLUECK, SHELDON & GLUECK, ELEANOR. *Criminal careers in retrospect*. New York: The Commonwealth Fund. 1943. Pp. xiv + 380.

The present volume is the third in a series of follow-up studies of the careers of 510 offenders who had been inmates of the Massachusetts Reformatory and whose sentences from that institution expired in the year 1921 and 1922.

In the first volume of the series the criminal careers of the half thousand men studied, prior to commitment to the Reformatory, during their terms of incarceration, and during the parole period, and their careers in five years following the Reformatory sentence are given. The second volume, called "Later Criminal Careers," presented the activities of the same group over a second

five-year span. The present volume deals with this same group of men during a third five-year period.

Of the 439 survivors of the original group of 510 young criminals more than 90% have been traced in this third five-year study. More than half of these individuals have been personally interviewed, and information about them has been secured from many sources. This information has been used in further developing what the authors call prognostic tables. These tables essentially analyze the factors appearing in the life histories of the young criminals and on the basis of these facts give a quantitative estimate of the likelihood of certain forms of future behavior, based upon characteristics of the individuals when they were first sentenced and the lives these same individuals subsequently lived.

The theory behind prediction tables is just the same as that which underlies any kind of actuarial work. On the basis of thousands of cases, life insurance companies can determine what are the chances of longevity for persons in various physical conditions and at various ages. On the basis of such tables they are able to determine whether or not a person should be insured who has a particular heart or lung condition, for example.

From the prognostic tables and data presented in this book it is clear that certain prereformatory differences in family and personal background are the same in those offenders who made good in society after their reformatory stay and those who continued to offend against society. But, more significantly, there are some statistical differences in the prereformatory characteristics of reformed and unreformed offenders. Family size, whether the parents are native-born or foreign-born, skilled or unskilled, are, for example, factors not diagnostically different for the reformed and the unreformed.

As a group those who were not reformed have many characteristics that seem to differentiate them from those who are reformed. For example, the unreformed tend to come from homes in which the parents were economically dependent. More of those unreformed than of the reformed were characterized as mentally defective or showing mental pathology.

The book further discusses on the basis of quantitative data the success or failure of various forms of peno-correctional treatment.

Fundamentally the book seems quite well to establish the thesis that neither chance nor various types of punishment but rather the basic makeup of the offenders determines the life pattern of criminals.

As the authors point out (287):

The *retributive-expiative* theory still too often dictates the sentence. The old argument that punishment is necessary as a "just retribution" or requital of "wickedness" is considerably weakened by the evidence that the causes of criminality are numerous and complex rather than that wrong-doing is "caused" by the calculated exercise of a completely "free will." Official social institutions—the criminal law and its peno-correctional instruments—ought in this day no longer to be founded essentially upon a theory of sublimated social vengeance or that "expiative theory" which is the reverse of the shield of retribution. Vengeance is a destructive and short-sighted emotional basis for coping with the biological and social problem of crime. Not only is it the expression of an infantile way of solving problems, but unjust and destructive of the very purpose of protecting society. The official social institutions of criminal law and penal treatment should not be occupied with the futile quest of making the criminal "expiate" his "sins." That is properly the domain of religion. Society's legal institutions are concerned with the utilitarian possibilities of a correctional régime—possibilities founded upon the social

purpose of the apparatus of justice; namely, the maintenance of the general security, with as little interference with the individual's rights as a human being as may be necessary for the achievement of that social purpose.

In view of this position the authors believe that the sentencing, correcting, and releasing functions in regard to criminals should be in the hands of a qualified body which would include psychiatrists, psychologists, social workers, and other professional men trained to understand human nature and society. The final conclusion of this book seems to the reviewer to be that society would indeed profit if real criminal justice should be administered by wise criminologists who continually strive to replace prejudice, guesswork, and mere concept of legal "guilt" with social and medical facts and legitimate inferences based upon the quantitative study of the facts which have entered into the making of criminal careers in the past.

The study reported in its current stages in this book is unique. It is not only full of important implications for the great human problem of the proper treatment of the criminal but it even goes so far as to suggest certain most important leads in the formulation of a really quantitative and deterministic philosophy or science of society.

LEONARD CARMICHAEL

Tufts College.

RECKLESS, W. C. *The etiology of delinquent and criminal behavior: a planning report for research*. Bulletin No. 50, Social Science Research Council. New York, 1943. Pp. xii+169.

In the Foreword, it is stated that this report "may be looked upon as an attempt to promote unified effort by the different disciplines—psychiatry, psychology, and sociology—engaged in the study of the causes of delinquent and criminal behavior" (viii). The purpose of the research planning report is "to review critically the progress of research, to note research trends and promising leads, to locate gaps in our knowledge and deficiencies in our methods and inadequacies in research organization, and to make recommendations for raising research standards and for securing an increase in our scientific knowledge" (ix). The bulletin consists of the report proper by Reckless and four appendices by various contributors.

In Chapter I, Reckless divides past and present contributions to the knowledge of the etiology of criminal behavior into three phases, an earlier phase of particularistic theories, a phase of somewhat disconnected first-hand research, and a phase of reformulation and systematization into which we are now moving.

In Chapters II and III, major emphasis is given to the drive for first-hand data which characterized the phase of disconnected research. The search for causes in the constitution of man and in the situations confronting him is described and some of the principal contributions are outlined. This part of the report is a noteworthy model of clear, concise, sympathetic, but highly critical reporting.

Chapter IV, entitled *Recent efforts to become systematic*, covers three systems: the German school of Criminal Biology with which are grouped the approaches of Healy and Bronner and the Gluecks; Sutherland's approach based upon "differential association"; and Sellin's formulation which shifts emphasis from the legal meaning of crime to its personal meaning to the criminal. Also included in this chapter are four supplementary approaches which contain the

elements of systematization: the study of "behavior processing"; analysis of behavior trait differences between offenders and non-offenders; Reckless's own actuarial approach; and the study of response to treatment. Because of its subject matter, Chapter IV cannot maintain the critical level of Chapters II and III, and Reckless does not feel disposed to point out that some of the reformulations are little more than the older particularistic approaches outfitted with empirical trappings which seem in some cases to have been cut to fit.

Suggestions for research occur throughout the report, but Chapter V and two of the appendices are given over specifically to promising research leads and recommendations. The recommendation that all important future research projects be cleared by a conference committee in order to avoid some of the "mistakes in method and neglect of viewpoints of neighboring disciplines, which have seriously limited the value of several previous studies in the field" (158) should evoke warm comment. Reckless points out that previous studies constitute a cogent argument in support of his recommendation.

Other appendices deal with resources and opportunities for research, records and statistics on crime and criminals, and some problems and projects. Although they vary considerably in relevance and coherence with the remainder of the report the appendices should prove helpful particularly to beginners in the field.

The report merits its chief criticism insofar as it fails to achieve the lofty purposes stated in the Foreword. Psychologists will probably feel that their contributions to the understanding of the etiology of criminal and delinquent behavior have been slighted and that the report does not actually represent "unified effort by different disciplines." Furthermore much of the material covered in the report is of an elementary nature—in fact more than half of the report is essentially a digest of four chapters of Reckless's book on criminal behavior.\* This should prove disappointing to workers in the field unless they have perchance neglected to read the basic sociological works on the causes of criminal behavior. Psychologists not working in this field will, however, find this report an extremely competent and critical introduction to the etiology of delinquent and criminal behavior, and an excellent general evaluation from the standpoint of the sociologist of the status of research.

DAVID A. GRANT.

University of Wisconsin.

MOORE, HERBERT. *Psychology for business and industry*. (2nd Ed.) New York: McGraw-Hill, 1942. Pp. xiv + 526.

Dr. Moore states in his introduction that—

The value of psychology to the world of business and industry is determined by the contribution that it can make to an understanding of the human forces that operate when people are brought together under the specific demands and controls that the business and industrial worlds make necessary. The extent to which it can help understand and find solutions for situations that are created by people with different abilities, different interests, different hopes, and different attitudes determines the extent to which it will join hands with the engineer and the economists in solving industrial problems.

After this sensible statement the author proceeds briefly but convincingly through some of the significant achievements of industrial psychology, a pro-

\* Reckless, W. C. *Criminal behavior*. New York: McGraw-Hill, 1940, pp. 182-256.

cedure which should provide the student or layman with a favorable attitudinal orientation toward this field.

*Getting a Job*, the second chapter, which achieves the happy double purpose of seeming and being practical to the average college student, is written so as to be of value to the individual in need of vocational guidance.

Subsequent chapters are addressed more to management than to the student or employee; although the interests of the worker are not forgotten. "The least noticeable and yet the greatest cost of improper selection is borne by the worker" and similar remarks emphasize that both management and the worker experience a dual benefit from aptitude testing, sound hiring procedures, employee rating, job training, motivating the employee, promoting the employee, studying and reducing accidents, reducing fatigue, adjusting the employee, and winning the consumer.

A reader will be impressed with the number and appropriateness of the tables and illustrations, which immediately testify to the extensive and critical survey of research that has gone into the compilation of the book. The many references to appropriate scientific literature are properly documented. As all books are biased by the interests, achievements, and philosophies of their authors it is to be expected that this work should be no exception. It places great emphasis upon psychological testing (150 pages), employee training (40 pages), employee accidents (50 pages), fatigue (40 pages), and consumer relations and advertising (60 pages). Relatively brief treatment is given to attitudes and to visual problems and visual testing. The value of the very excellent chapters on testing would be enhanced if complemented by a chapter dealing with the practical problems of setting up a testing program in a company, obtaining the support and cooperation of foremen and management, and establishing acceptable routine procedures which guarantee discreet but complete utilization of data supplied by the psychologist.

Some industrial psychologists will question Dr. Moore's statement that ". . . the services of a reputable organization can serve the occasional needs of business and industry in a more adequate manner than could the constant presence of one psychologist whose field of concentration limits him to a small number of aspects of the industrial situation" on the grounds that the psychological needs of most large companies are continuous rather than "occasional" and that the permanent psychologist has the opportunity to obtain a deeper understanding of the particular problems of his own company and specific industry than has the outside organization; even though the additional service of an outside organization may be very worthwhile on specific major problems. Also, many companies hesitate to release confidential records and data to an outside agency.

Although there are few serious omissions in this valuable book, the section on fatigue and boredom is incomplete in that the important developments related to combatting fatigue and boredom—such as the introduction of rest period lunches and the acceptance of music in repetitive work situations are not presented. These innovations have gained general acceptance only since the book was written.

WILLARD A. KERR.

*Industrial Opinion Institute.*

BOWLEY, AGATHA H. *Guiding the normal child.* New York: Philosophical Library, 1944. Pp. xv + 174.

This simple and concise little book ambitiously attempts to cover the entire period from birth to adolescence, summarizing essential factual data from research studies, and offering concrete advice on the problems of normal children, including breast-feeding, teething, weaning, toilet training, language development, social-emotional development, play, etc., and many problems which are sometimes considered to verge upon the abnormal, such as temper tantrums, nail-biting, head-banging, delinquency, backwardness, and mental deficiency. It even includes sections on remedial teaching methods for children with specific difficulties in arithmetic, reading, and spelling. The general point of view is that "a child's happiness is far more important ultimately than the level of his scholastic achievements" and also that "most of us grown-ups have a good deal to learn about not interfering" with the normal growth process.

Professional psychologists will probably be familiar with most of the facts and theories cited and in agreement with the concrete suggestions for guidance; but the parents, teachers, social workers, and physicians for whom the book was primarily intended should find it helpful, because it brings together into one clear, simple picture the essential practical conclusions to be drawn from a mass of experimental, clinical, and educational data rarely summarized in such a brief, nontechnical form.

The only chapter having much new value for psychologists is that entitled *Children and the War*. The author is a Scottish psychologist with much direct experience in working with children during the present war. In addition to her original data, she summarizes more than a dozen recent studies by other investigators. Her conclusions are optimistic. Children assimilate air raid experiences remarkably well on the whole. Even babies rapidly condition themselves to sirens and noise. She finds that most children are less disturbed by air raids than by evacuation without their parents. Preschool children evacuated without their parents do not usually adjust well. Neither do adolescents. School children may adjust fairly well to evacuation if the school unit remains intact and their own teacher goes with them and the foster homes are carefully chosen. Children seem to require the presence of familiar and trusted adults; but with these to set them a brave example, they can learn to live dangerously and adventurously and like it.

MABEL F. MARTIN

Peru State Teachers College.

## NOTES AND NEWS

FRAZER HOOD, professor of psychology, Davidson (N. C.) College, died, June 19, at the age of sixty-nine years. Dr. Hood had served as professor of ethics and English literature (1902-03), Hanover (Ind.) College; acting professor of psychology (1903-04), University of Oklahoma; professor of psychology and head of the department of education (1913-18), Western Tennessee State Normal School; director, psychological laboratory, and professor of psychology (1919-20), Northwestern University; and professor of psychology (since 1920), Davidson College.

KARL M. COWDERY, academic secretary and associate registrar of Stanford University, died on September 12, 1944, at the age of forty-nine years. Dr. Cowdery received his B.A. degree from Oberlin in 1915, his M.A. from Stanford in 1922, and his Ph.D. from the same institution in 1926. He has served on the faculty of Stanford University since 1926 and is well known for his work in guidance, personnel research and the development of tests.

New officers for the *American Psychological Association*, elected by a mail ballot, were announced by the Committee on the Election of Officers at the Fifty-Second Annual Meeting in Cleveland. EDWIN R. GUTHRIE of the University of Washington is the new *President* for the year 1944-45, CARL R. ROGERS of Ohio State University and Dr. Guthrie were elected as the new members of the *Council of Directors* for the term 1944-47. Since Dr. Guthrie had also been elected to the Presidency, DAEL WOLFLE of the University of Chicago was elected at the Annual Meeting as a member of the *Council of Directors* in his stead. The continuing officers of the Association are WILLARD C. OLSON, *Secretary* (1943-46), WILLARD L. VALENTINE, *Treasurer* (1942-47), and SIDNEY L. PRESSEY (1942-45), ROBERT H. SEASHORE (1942-45), C. M. LOUTIT (1943-46), and DONALD G. MARQUIS (1943-46), *Members of the Council of Directors*.

The results of the mail ballot on the proposed new By-Laws of the *American Psychological Association* were announced and discussed at the Annual Meeting in Cleveland on September 11 and 12, 1944. On Tuesday afternoon, September 12, the business meeting of the *American Association for Applied Psychology* and of the *American Psychological Association* gave unanimous approval to the new By-Laws and to plans for a transitional year to make the merger of the APA and AAAP effective at the Annual Meeting of 1945. The plan continues the *American Psychological Association* with By-Laws which make it inclusive of all interests in psychology. A complete report of the Joint Constitutional Committee, which developed the plan, and of the results of the mail ballot and other actions will be found in the Proceedings in the *Psychological Bulletin* for December, 1944.

The following officers for the year 1944-45 have been elected by the Metropolitan New York Association for Applied Psychology: *President*, W. H. WULFCK; *Vice president*, EDNA E. LAMSON; *Executive Council*, ANNA S. STARR and JEANNE G. GILBERT. GLADYS C. SCHWESINGER continues as *Secretary-Treasurer*, and EDITH M. ACHILLES and JOHN G. PEATMAN continue as members of the *Executive Council*.

A Unit of the Medical Research Council for Research in applied psychology has been set up in the psychological laboratory of the University of Cambridge, of which F. C. BARTLETT is the head. K. J. W. CRAIK has been appointed to the staff of the council as director of the unit. Members of the unit will undertake work elsewhere than at Cambridge, including investigations for the Industrial Health Research Board of the council.

Princeton University announces the promotion of JOHN M. STALNAKER from an associate professorship to a professorship of psychology.

R. N. SANFORD and E. E. GHISELLI of the University of California have been promoted to associate professorships in psychology.

Indiana University announces the appointment of VINCENT NOWLIS, formerly assistant professor of psychology at the University of Connecticut, as assistant professor of psychology. Dr. Nowlis will act as research associate in the studies on human sex behavior being carried out by Dr. A. C. Kinsey.

HERBERT C. McMURTRY, formerly head of the department of psychology at Yankton College, South Dakota, has been appointed associate professor of psychology at Willamette University, Salem, Oregon.

Lieutenant-Colonel IRVING C. WHITTEMORE, professor of psychology, Boston University, has been appointed morale-services officer on General Mark Clark's specialist staff with the Fifth Army in Italy. Among other duties, he will direct the educational activities of the Fifth Army.

HAROLD B. PEPINSKY, of the University of Minnesota, has been appointed counselor for the Vocational Counseling and Guidance Center, University of Kansas.

A. Q. SARTAIN, associate professor of psychology in Southern Methodist University, Dallas, Texas, is now on leave from the University. He is serving as director of psychological testing and research for North American Aviation, Inc., Dallas Division.

T. GAYLORD ANDREWS, instructor in psychology at Barnard College of Columbia University, has been appointed assistant professor in the department of psychology at the University of Chicago.

THELMA HUNT has been promoted from associate professor to professor of psychology at George Washington University.

Knox College (Galesburg, Ill.) has announced the appointment of CHARLES BUMSTEAD, formerly assistant professor of psychology at the University of Oklahoma, as associate professor of psychology.

RALPH E. DUNFORD, professor of psychology, University of Tennessee, has succeeded John O. Mosely as dean of students.

J. FRANKLIN WALKER, professor of educational psychology, University of Arizona, has been appointed dean of the Graduate School.

F. ALVAH FREDENBURGH, personnel director, Gimbel Brothers (Philadelphia), has become director of industrial relations for Loft Candy Corporation, Long Island City, N. Y.

HENRY P. SMITH, associate professor of education and psychology, Arizona State Teachers College (Flagstaff), has been appointed assistant professor of education, School of Education, Syracuse University, to serve during the absence of Raymond G. Kuhlen, on duty as a lieutenant (j.g.) in the Naval Reserve.

CAPTAIN MILTON E. HAHN, assistant to the officer in charge of the personnel-classification section, U. S. Marine Corps, has been appointed associate professor of education, Syracuse (N. Y.) University, where he will have charge of a graduate program to train guidance officers for schools and business and will organize a guidance center for returning veterans and all other students.

Beginning with January, 1945, it is planned to bring out a *Journal of Clinical Psychology*. It will be a professional journal limited to the publication of original research and authoritative theoretical articles in the field of clinical psychology. The journal will appear quarterly and will contain about three hundred and twenty pages annually. Editorial and business offices will be at the Medical

College Building of the University of Vermont, Burlington. One of the purposes of the *Journal* will be to work toward a more formal organization of professional resources in clinical psychology and to improve interprofessional relations with other sciences, including psychiatry.

In the seventh edition of the Biographical Directory of *American Men of Science*, the following psychologists have been starred: CHARLES W. BRAY, Princeton University, ELMER CULLER, University of Rochester, CLARENCE H. GRAHAM, Brown University, JOY P. GUILFORD, University of Southern California, EDWIN R. GUTHRIE, University of Washington, ERNEST R. HILGARD, Stanford University, CARLYLE F. JACOBSEN, Washington University, DONALD G. MARQUIS, Yale University, GARDNER MURPHY, College of the City of New York, BURPHUS F. SKINNER, University of Minnesota, STANLEY S. STEVENS, Harvard University, ROBERT C. TRYON, University of California, Berkeley, MORRIS S. VITELES, University of Pennsylvania. The number of now living psychologists who have been starred in the successive editions is as follows: 1st edition, 19; 2nd, 7; 3rd, 15; 4th, 9; 5th, 11; 6th, 12; 7th, 13; for a total of 86.

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